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ABSTRACT

This guide to surveying college students, graduates, and dropouts accompanies The Student Outcomes Questionnaires developed by the National Center for Higher Education Management Systems. Student outcomes are defined as the results or consequences of a student's enrollment in a post secondary educational program. The Student Outcomes Questionnaires are designed for either community colleges or four-year colleges and universities; separate forms are available for entering students, nonreturning students, former students, graduates, those who completed a program, and recent alumni. Each of these forms and a general followup questionnaire are included. The student outcomes measured by these questionnaires include information on student's background, goals, aspirations, plans, attitudes, activities, educational plans, occupational choices, and reasons for making certain decisions. Guidelines for data collection, planning and administration of surveys, coding and data processing, data analysis, and presentation of results are discussed. (GDC)

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A HANDBOOK FOR USING
THE STUDENT OUTCOMES QUESTIONNAIRES

Field Review Edition

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A HANDBOOK FOR USING THE STUDENT OUTCOMES QUESTIONNAIRES

Field Review Edition

February 1977

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An Affirmative Action/Equal Opportunity Employer

PREFACE

This *Handbook* was written as a guide in conducting studies of the student outcomes of higher education using the *Student Outcomes Questionnaires: Four-Year College and University Series* (Bower and Renkiewicz, 1977) or the *Student Outcomes Questionnaires: Community College Series* (Renkiewicz and Bower, 1977). The *Handbook* contains guidelines for three general areas:

1. developing a plan for collecting longitudinal student data;
2. planning and conducting a survey of students; and
3. using the results of student outcomes studies.

The *Student Outcomes Questionnaires* and the *Handbook* (as well as a fourth document, *Sample Reports from a Student Outcomes Survey* [Bower, 1977]), were written for those institutional administrators and researchers who lack the time and money to invest in developing their own procedures and questionnaires for conducting student outcomes surveys. The questionnaires were developed through a combination of previous pilot-test work at NCHEMS, reviews of the literature and institutional outcomes studies, and examination of surveys of the kinds of student outcomes information most needed by institutional users.

Selected parts of this *Handbook*, mainly those concerned with conducting student surveys, first appeared as *A Manual for Conducting Student Attrition Studies in Institutions of Postsecondary Education* (Bower and Myers, 1975). As the concept of the present set of related documents and questionnaires developed, material from the *Attrition Manual* was modified based on field experiences and combined with new materials concerned with longitudinal data collection plans and with using student outcomes data in the planning and management process. Thus, in terms of field experience and conceptual development, the *Handbook* has evolved over the last three years. Continued change and improvement are envisioned over the next year as a result of general reactions to this review edition and feedback obtained from the pilot-test administrations of 18 student outcomes surveys in six institutions of higher education during 1977 using this *Handbook* and the *Student Outcomes Questionnaires*.

Readers or users of this *Handbook* or the *Questionnaires* are invited to write to us with comments or suggestions for improving any of these materials or procedures. In addition, we would be very interested in receiving information about (1) the results of the studies undertaken using these questionnaires and (2) the ways in which your institution planned to and did use the information obtained from a student outcomes survey.

ACKNOWLEDGEMENTS

Many people were helpful in the preparation and review of this field review edition of the *Handbook for Using the Student Outcomes Questionnaires*. In his role as Outcomes Project manager, Sid Micek provided support for this effort in many ways. A number of staff members provided useful comments and suggestions for this manual including AI Service, Ed Cooper, Bob Passmore, Oscar Lenning,

Maureen Byers, Dennis Jones, John Chaney, and Dick Johnson. Jack Rossman of Macalester College and Enrique Soliz of El Paso Community College also reviewed this *Handbook* and contributed helpful suggestions for improving the content and format. Last, but not least, are special thanks to Penny Baskin for typing and overseeing the administrative aspects of this *Handbook*.

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I. INTRODUCTION

The postsecondary education institution of today is faced with increasing demands for information about its students. Legislators, budget and financial officers, planners, department heads, faculty, institutional researchers, students, and many others all have needs for information about the students enrolled in the institution. Fiscal managers may be interested in the percentage of students who dropped out in the last year and their reasons for leaving. Department heads and other faculty members may need information on projected major fields of new students. Students themselves want to know employment and postgraduate experiences of recent program graduates before committing themselves to a major field of study. Institutional planners may need information on student behavior over time, such as changing trends in choice of student major fields. Community college personnel may need to ascertain whether the high turnover of students reflects dissatisfaction or indicates that they are getting what they came for. And all institutions receiving federal financial aid funding must report certain retention and program completion data as of July, 1977.*

All of these needs, and many others that might be listed, have in common the facts that the needed information concerns students and that in most cases students must be surveyed or interviewed in order to obtain reliable answers. One way for institutions to meet their needs for student outcomes information, therefore, is to develop and construct specific questionnaire materials and appropriate survey or interview strategies each time the need arises for answers to particular questions. Unfortunately, there are a number of drawbacks to this approach. Perhaps the major one is the lack of time, money, and staff to devote to developing new materials and procedures each time there is a need for information. Another problem is the lack of comparability of data items from one institution to the next

even when all have sought the same general information. Another is the lack of a framework with which to think about, organize, and integrate student information needed and collected. And, even when institutions can commit time and effort to developing materials and procedures for collecting student information and can make an effort to collect data items comparable to those of other institutions, there is an implicit waste of resources in the duplication of effort that occurs as time and money are spent for exactly the same developmental processes across institutions.

What is needed, therefore, is a set of materials and procedures for collecting information about the student outcomes of postsecondary education. The NCHEMS Student Outcomes Questionnaires and this *Handbook* are intended to help meet this need by providing (1) a plan for collecting and integrating student outcomes information, (2) general guidelines for conducting postsecondary educational student outcomes surveys, and (3) specific questionnaires for conducting student surveys of entering students, graduating students, alumni/former students, and students who leave without graduating. It is hoped that the *Handbook* also will encourage the collection and use of student outcomes data by illustrating how such information can be used to facilitate better planning and management at postsecondary institutions.

The intended users of this *Handbook* are those college or university administrators who are in a position to implement and/or coordinate student outcomes studies; that is, this set of manuals was written with the intention of providing practical guidance for those who want to conduct outcome studies. Generally, the material is written for those who have at least some familiarity with conducting surveys. Those readers who have a great deal of survey experience may wish to skim through this *Handbook* and may find most useful the specific questionnaires given

*See House of Representatives Report No. 94-1701

in *Student Outcomes Questionnaires: Community College Series* (Renkiewicz and Bower, 1977) and *Student Outcomes Questionnaires: Four-Year College and University Series* (Bower and Renkiewicz, 1977). A second companion document to the *Student Outcomes Questionnaires* is also available: *Sample Reports from a Student Outcomes Survey* (Bower, 1977).

What are "Student Outcomes"?

There are numerous definitions and explanations of the phrase "student outcomes" as related to the postsecondary education process. Perhaps the most straightforward definition is: a student outcome is the result or consequence of a student's enrollment in an educational program. Outcomes can be direct and immediate and are then called outputs, or they can be less immediate and indirect and called impacts. (A simple example of an educational output is a student's acquisition of a new fact because of attendance at a class lecture. An educational impact might be a student's increased interest in civic affairs after college, stimulated in part by his/her political science courses.) Outcomes of one educational system may become inputs to other educational systems. Thus, students receiving associate degrees from community colleges may enter four-year programs at other schools. Similarly, intermediate outcomes (while a student is still enrolled in a program) affect and are inputs to other choices and other outcomes of the same educational program. A student's choice of major as a sophomore, for example, clearly affects subsequent educational outcomes for that student.

Several other distinctions that can be made among student outcomes should be noted. Some outcomes may be designed or intended to occur while others may be unintended or accidentally produced. Some may be easy to measure while others may be difficult to measure. Some outcomes may be valued positively by the institution or by people in society while others may be seen as detrimental. Most may involve change in student characteristics or situations, but others may involve preserving student characteristics or

situations. For further elaboration and discussion of these distinctions and their sources in the literature, the interested reader is referred to *A Structure for the Outcomes of Postsecondary Education* (Lenning, Lee, Micek, and Service, 1976); *An Overview of the Outcomes Structure: Its Application in Postsecondary Institutions* (Lenning, 1976); and *Attempts to "Structure" Educational Outcomes and Outcome-Related Concepts: A Compilation and Review of the Literature* (Lenning, 1975).

What Student Outcomes are Measured by the Questionnaires?

The student outcomes measured by the questionnaires developed by NCHEMS include information on students':

- background
- goals
- aspirations
- plans
- attitudes
- reasons for making certain decisions
- activities
- educational plans
- occupational choices

The four questionnaires are:

1. Entering Student Questionnaire: This questionnaire can be administered to any entering college or university student. Baseline data provided by a survey of entering students using this questionnaire include demographics, educational and occupational experience and plans, sources of funding for school, goals in attending school, and reasons for selecting this particular institution.
2. Nonreturning Student Questionnaire (Four-Year College and University Series) or Former Student Questionnaire (Community College Series): These questionnaires can be administered to any student who leaves the institution without receiving a degree or certificate. In addition to demographic and background data concerning students' experiences and progress at the institution, a survey of nonreturning students using these questionnaires would provide detailed information as to why students did not return to this school (both positive and negative reasons), and their satisfaction with various institutional services.

3. Graduating Student Questionnaire (Four-Year College and University Series) or Program Completer Questionnaire (Community College Series):

These questionnaires can be administered to any student who is about to earn a degree or certificate from a college or university. A survey of graduating students using these questionnaires would provide demographics, background data, and information on students' satisfaction with various institutional services similar to that provided by the Nonreturning or Former Student Questionnaires, as well as students' ratings of how well this school helped them reach their goals, and information about students' future educational plans.

4. Recent Alumni Questionnaire (Four-Year College and University Series) or Follow-Up Questionnaire (Community College Series):

These questionnaires can be administered to any recent alumni of a four-year college or university (Series A) or any former students of a community college who were enrolled in degree, certificate, or vocational programs (Series B). A survey of former students of a community college or recent graduates of four-year institutions using these questionnaires would provide demographic and background data of students' progress at the institution as well as considerable detail about (a) the first degree program a student enrolled in since leaving the school and (b) the first full-time job a student held since leaving the school. These questionnaires should be administered between three and nine months after students have left the school.

How Were the Questionnaires Developed?

The measures included on these four questionnaires were selected partly as a result of preliminary pilot-test work with a number of colleges and universities beginning in 1973 and continuing to the present. In addition to this on-going field work, NCHEMS staff reviewed a large number of questionnaires and summary reports written by institutional researchers studying various aspects of two-year and four-year college and university educational outcomes. Two surveys (see Micek and Arney [1974] and Romney [1976]) that assessed the relative importance to different types of constituencies of various outcome measures also were used ... developing the items for these questionnaires.

None of the questionnaires in this series have been pilot tested in their present form. Most items on these questionnaires have been tested individually, however, either on previous NCHEMS versions of these questionnaires or on the questionnaires from which certain items were taken, such as the Bureau of Census Educational Attainment Survey or the American Council on Education Survey of Entering Freshmen. Pilot testing of all four questionnaires will take place during 1977 at three community colleges for Series B and three comprehensive colleges for Series A for four-year colleges and universities. Additional pilot testing at other targeted types of institutions is planned for 1978.

How Do the Questionnaires Fit Together?

All four questionnaires in each series were intended to be used in sequence so that longitudinal data can be collected on students. By the periodic administration of these questionnaires to the appropriate students, colleges and universities will be able to measure the progress of their students and the impacts of college on their students. The data obtained from longitudinal outcomes studies can be used and compared with previous studies within the institution as well as with similar data obtained from other institutions using these questionnaires.

Each questionnaire was designed to collect from students the most important information colleges and universities want, at the most appropriate point in time. For example, information about students' satisfaction with various college services is included on the Graduating (or Program Completer) and Nonreturning (or Former) Student Questionnaires since students' feelings and attitudes about these services are still fresh at this time. These same questionnaires contain few questions about students' educational and occupational plans because, for many students, these plans are not yet final. The Former Student and Recent Alumni Questionnaires, on the other hand, intended for students who have been away from the college for three to nine months, de-emphasize students' degree satisfaction with the college and emphasize students' ability to get into and succeed in their first educational programs and to find and succeed at their first

jobs.

It is important, therefore, that these instruments be viewed as an integrated system of questionnaires and not as "one-shot" data-gathering instruments. Not only will the institution lose important analytical capabilities by not collecting longitudinal data from students at appropriate intervals, but also the use of one instrument without the others will mean the loss of certain information contained on one questionnaire and not the others.

How Can Student Outcomes Information Be Used?

A recurring theme throughout these manuals will be that data about the student outcomes of postsecondary education should be collected for the purpose of improving institutional functioning and decision making. This can occur in a variety of ways. Student outcome surveys can provide information that might suggest the need for institutional change. A study of alumni or program completers, for example, might reveal that students from certain programs have difficulty in getting accepted into further educational programs of their choice. Or an attrition study might reveal that a disproportionately high number of those who dropped out are concentrated in certain programs, and that most of these students left because of dissatisfaction with their major field. Each of these findings may suggest the need for institutional changes.

Outcomes studies can provide documentation of students' attitudes and activities related to institutional programs and services. Community college personnel involved in the pilot testing of the attrition manual, for example, were pleased to find out that most of those who left were very satisfied with their experiences at the school. As the staff had suspected, but had not been able to document before, the college was serving the community function of providing courses for the "occasional" student—the person who wanted to take a course as time and money permitted, but who did not intend to enroll in or complete a degree or certificate program. This information was valuable to the community college because it demonstrated

to funding agencies that the college was performing a useful community service and provided an explanation for the high student turnover.

Outcomes studies can provide information to help students choose their program of study. Data such as type of job obtained, salary, satisfaction with first job, acceptance into further educational programs, and so on, are of definite interest to students, particularly with the current labor market situation. Such information might also be important to students in making their initial decision about which institution to enroll in.

Student outcomes information collected at routine intervals and plotted over time may provide valuable insights into student trends as they occur. Changes in attrition factors, choices of major field, student attitudes and satisfaction with institutional services, decisions about further schooling, job availability, and so forth may all be detected by the ready availability of student outcomes information. Furthermore, changes may be detected at the point where they first occur so that corrective action, if necessary, can be instituted before a major problem occurs rather than at the point where the problem is so large that it either cannot be resolved or that major institutional resources must be dedicated to the resolution of the problem. One example of this use of outcomes data comes from a small midwestern college that has been routinely monitoring attrition trends. Recently, the staff found a small but noticeable trend toward more students failing to return after the summer than in past years. They are currently investigating the reasons for this change and watching for evidence that the trend will continue. Clearly, they will be in a better position to plan for fall admissions and registration with knowledge they are gaining by monitoring attrition and the reasons for its occurrence.

Another use of student outcomes information (collected using materials containing identical data items) is the ability of similar institutions to make comparisons of information among themselves. While there is always some concern that comparable data ex-

changed among institutions will be improperly used, particularly in a normative sense, there are enough valid reasons why institutions need comparable data from others similar to themselves to justify, in the view of most institutional staff, the exchange of student outcomes information. Comparable data may illuminate problem areas within an institution, but also may show that certain problems are common across institutions and perhaps not correctable by individual schools. The small midwestern college that was concerned about changing attrition trends, for example, is investigating the possibility that other similar colleges might be experiencing the same problem. Clearly, this will be easier to determine if these other colleges collect attrition data in the same way. Another example of the value of comparable data can be found in the use of Graduating Student or Program Completer surveys. An institution may find that graduates from certain departments have substantial difficulty in obtaining jobs. Comparable data from graduating students at other institutions can show whether the problem is fairly universal or whether it is limited to a single institution. Either finding would certainly lead to a different institutional course of action.

What are the Future Plans for the Questionnaires?

The questionnaires in this booklet are the pilot-test versions of the NCHEMS Student Outcomes Questionnaires. As stated above, these questionnaires will be tested during 1977 by three community colleges for Series B and three comprehensive colleges for

Series A, and, at the end of this year of pilot testing, the questionnaires will be revised and published for general distribution. During this year, the *Handbook* also will be adapted and tailored to the specific needs of community colleges and comprehensive colleges and will be published along with questionnaires in first edition form for general distribution. In addition to these two efforts, NCHEMS will be working on the development of fifth and sixth questionnaires: the Current Student Questionnaire, for students currently enrolled in a college or university program, and the Five-Year Alumni Questionnaire, for former college and university students who graduated five years past. These questionnaires will be tested during 1978 and added to this booklet when testing and revisions are completed.

How Do I Order the Questionnaires?

Write to: NCHEMS Publications
P.O. Drawer P
Boulder, Colorado 80302

Single sets of four questionnaires (either Series A or Series B) are available at \$.50 per set (\$.05 per questionnaire for quantities of 50 or more).

Specify:

Quantity Needed
Name of Questionnaire

Series A or B (Series "A"—Four-Year Colleges and Universities series or Series "B"—Community College series)

Whether you wish the questionnaires pre-folded for administration or whether you wish them unfolded so your institution's name/logo can be printed on the front fold.

II.

DEVELOPING A STUDENT OUTCOMES DATA-COLLECTION PLAN

Many institutions of higher education need to know not only about student attitudes and plans at particular points in time, but also about changes in plans and attitudes of students over time. For example, certain institutions may need information about why specific kinds of students are dropping out and will therefore conduct an attrition study. Others may wish to routinely monitor students' progress through their institution and treat an attrition study as only one part of an overall plan for collecting longitudinal data. For those who are interested in continual monitoring of student plans, attitudes, and decisions, and for those who want to track student change from the time students first enter the institution through future years away from the school, a plan for collecting student outcomes data is presented here.

A Plan for Collecting Student Outcomes Data

Figure 1 illustrates the typical flow of students through four-year colleges and universities, with six suggested data collection points superimposed on the illustration. These six points are:

- as a student enters (may be freshman, transfer, or graduate level)
- while the student is currently enrolled in a higher educational program
- as a student graduates (may be undergraduate or graduate degree)
- as a student drops out without graduating
- three to nine months after graduation
- five years after graduation.

Questionnaires developed by NCHEMS for surveying students at four of these points in time are contained in *Student Outcomes Questionnaires: Four-Year College and University Series* (Bower and Renkiewicz, 1977). Questionnaires for current students and five-year graduates will be added in the near future.

Figure 2 illustrates the typical flow of students through community colleges and shows five suggested data collection points:

- as a student enters (may be for certificate or degree program or selected courses)
- while the student is currently enrolled
- as a student graduates (may be degree or certificate)
- as a student leaves without graduating
- three to nine months after a student has left (for degree, certificate, or other vocational students)

Five outcomes studies are suggested rather than the six suggested for four-year institutions because of the different philosophy underlying the operation of community colleges. It is typical for community college students to enroll for a wide variety of reasons, ranging from personal enrichment or preparing for professional examinations to seeking a certificate or an associate degree. It is also typical for these students to take courses as money, time, and interest allow, not necessarily continuously through a prescribed program. Thus, to speak of dropouts or alumni makes little sense for many community college students who never were enrolled in a degree or certificate program from which they could drop out or become alumni. For these colleges, it makes sense, instead, to distinguish between nonreturning or former students and graduates or program completers, and to follow up, three to nine months after leaving, the vocationally-oriented students (whether or not they earned a degree or certificate). Questionnaires for surveying students at four of these five points in time are contained in *Student Outcomes Questionnaires: Community College Series* (Renkiewicz and Bower, 1977). A questionnaire for current students will be added in the near future.

It should be reiterated that not all the information collected at these points in time would be considered "outcomes" information in the sense of effects on students caused by the institution. But a good comprehensive data collection plan that will permit the measurement of student changes over time necessarily must include the gathering of data about students' background and intentions before and during their enrollment; that is, baseline

Figure 1
DATA-COLLECTION POINTS FOR FOUR-YEAR INSTITUTIONS

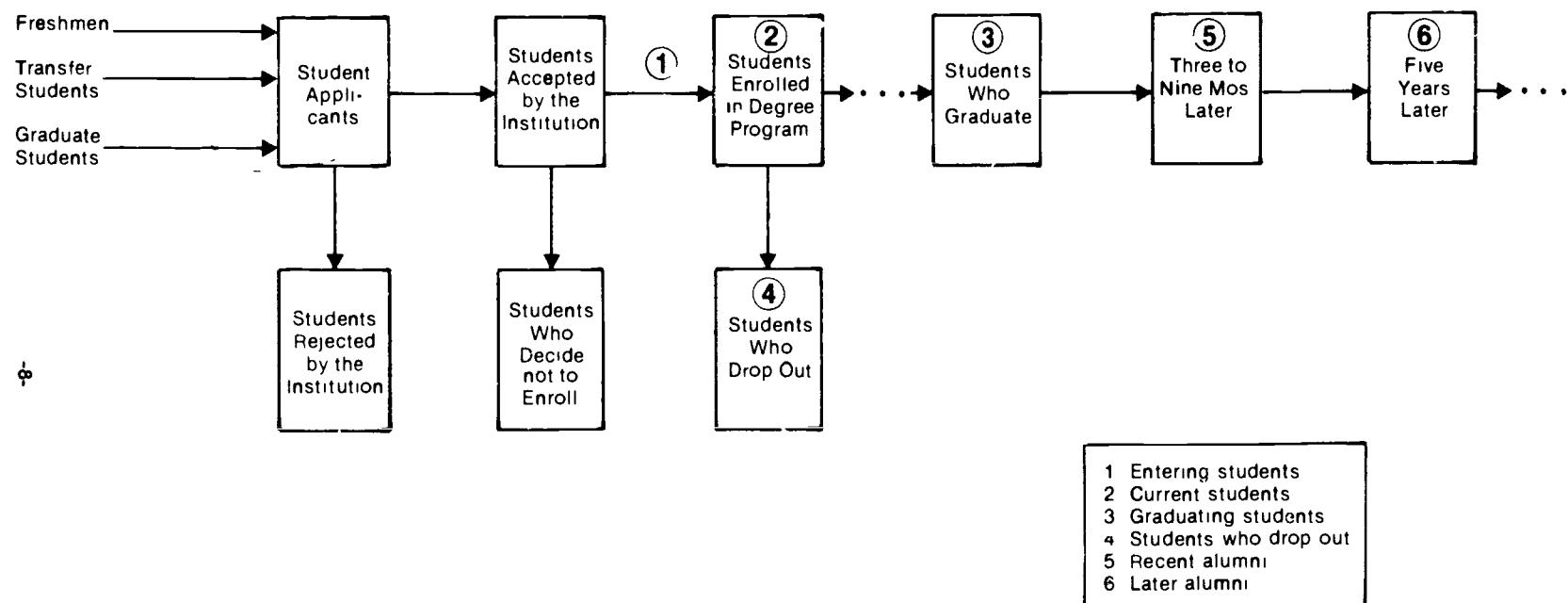
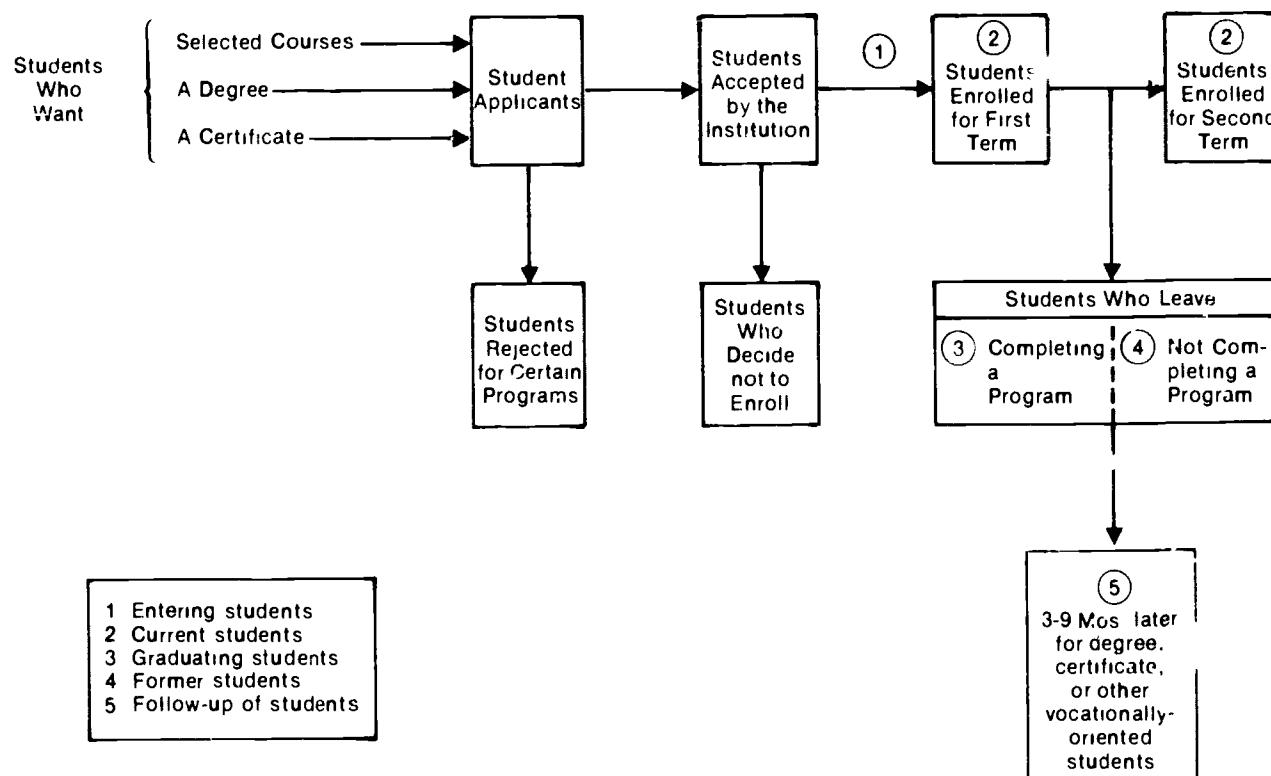


Figure 2
DATA-COLLECTION POINTS FOR COMMUNITY COLLEGES



data. Further, it is often desirable to be able to adjust true outcomes (such as type of job obtained, graduate school program accepted into) by controlling for type of input (high school GPA, SAT or ACT scores, high school and undergraduate work experience, and so forth).

The data collection plans suggested here are intended to be flexible. Some institutions may not need or want to survey students between the times they enter and graduate, for example. Others may want to add an additional data collection point. The purpose of presenting data collection plans in this *Handbook* is not to promote rigid models but rather to provoke thought about the value of such plans, however they might be modified to fit individual institutional needs.

Schedules and Administration Cycles

In order to implement a comprehensive student data-collection plan such as that suggested here, two issues must first be confronted. One issue concerns scheduling—the optimal time of year to administer each survey. The second concerns the cycling of each survey—the frequency of administration of each type of survey. Closely related to this is the decision of which surveys should be administered.

In general, the optimal time of the year for administering each type of survey is near the point in time that the outcomes or events of interest happen to the student. Following this guideline ensures that students will not have to try to remember what they did several months in the past and that they won't have to recreate old feelings, attitudes, reasons for decisions, and so forth. Thus, the entering student questionnaire should be given to students with confirmation/acceptance materials as they register, or shortly after they enrol—for most institutions, the beginning of the fall term. The graduating senior questionnaire should be given shortly (two or four weeks) before graduation--for most schools, May or June. A current student questionnaire could be administered any

time* during the academic year, depending on the information to be collected from the survey. Routine attrition surveys should be conducted, if possible, as soon after the beginning of the term as nonreturning students from the previous term can be identified. (Many institutions may want to conduct only one attrition survey each year, in which case there are several potentially good administration times—after the fall term has begun, after spring semester or winter quarter has begun, or after the spring quarter has begun. The spring semester or winter quarter times might be selected if it is desired to stagger the time of administration of the various surveys in the plan.) Finally, the two alumni surveys or follow-up survey should be administered at a time appropriate for the information being asked of students on the questionnaire. Because many of the questions on the Recent Alumni Questionnaire and Follow-Up Questionnaire deal with students' first jobs or first graduate school choices, three to nine months after graduation or leaving the college is a good time for these surveys. Surveys of alumni in which questions are directed at job level, salary, highest educational degree earned, and other similar status and recognition information are best administered several years after graduation when graduates have begun to follow relatively stable career paths. Figure 3 summarizes these scheduling suggestions.

The second issue to be considered in developing a plan for routinely collecting student outcomes data is that of the frequency of administration of each type of survey, and related to this, the decision of which of the five or six surveys to administer. Essentially, there are two questions: (1) how often should each type of survey be administered in order to minimize cost and yet still provide up-to-date, useful information for the institution? and (2) which of the possible surveys suggested here or others will yield data of sufficient importance and relevance to the

*While this questionnaire can be administered whenever appropriate throughout the year, there are certain times when students might feel less interest and enthusiasm for responding than others, these include immediately before and after exam periods, holidays and vacations and during special campus events. Late afternoon and late days of the week might also be avoided if possible.

Figure 3
SCHEDULE FOR IMPLEMENTING DATA-COLLECTION PLAN

Type of Survey	If Administered Once	If Administered at Each Opportunity	Additional Comments
Entering Student	Beginning of fall term	Beginning of each term that new students are accepted	Might be included with registration materials
Current Student	Near the point in time most appropriate for the information being collected		
Graduating Student or Program Completer	Near the end of the spring term	Near the end of each term that students graduate	Might be included with materials for graduation
Nonreturning or Former Student	Two weeks to one month after beginning of fall term, spring semester, winter quarter, or spring quarter	As soon after beginning of each new term that non-returning students from previous term can be identified	Might be included with materials required for withdrawal or leave of absence
Recent Alumni or Follow-Up	Three to nine months after spring graduation	Three to nine months after graduation	It is especially important when asking graduates about first job and first educational program after graduation to administer the questionnaire no more than nine months after graduation to avoid confusion about which job and which new degree are being referenced
Five-year Alumni	Several years after graduation when graduates have begun to follow relatively stable career paths		

institution that the cost and effort required to administer and process the questionnaires are justified by the returns to the institution?

There certainly are no definitive answers to these questions and each institution will have to make decisions about these questions based on its own resources and information needs. If cost, staff time, and overburdening of students with questionnaires were of no consideration, then institutions might theoretically want the information gained by administering each type of questionnaire one or more times each year. Since these factors are, in fact, considerations at most institutions, some compromise must be reached between them and institutional information needs. There are numerous possibilities for staggering one to six of these surveys across years, but one factor should be kept in mind when considering various options for doing so: for most purposes, longitudinal data (data collected from the same students at different points in time) will be the most useful to the institutions, particularly for the purpose of investigating changes in student plans, attitudes, and decisions over time. Therefore, while most institutions will not wait to administer every survey every year, the plan should encompass the need to at least survey the same students over time. There are two good approaches to this problem, each based on the premise that data from all entering students are critical to the development of a longitudinal data base:

1. Survey every entering student class and then follow up each group of students as

2. the need arises or according to a cyclical plan such as is suggested below.
2. Survey all or a sample of selected entering student classes at set intervals of time such as every two or three years and then follow up each group of surveyed entering students as the need arises or according to a cyclical plan such as is suggested below.

By always collecting data from entering students and then basing the rest of the data-collection cycle on these students, the institution will be assured of having available the critical information in a longitudinal plan dealing with input—plans, intentions, student background, and so forth.

There are many variations of the data-collection cycle that institutions might consider. One possible data-collection plan would be to administer the entering student survey every two years, and at times appropriate for each subsequent questionnaire, to follow up the initial group of students as they progress through and out of the institution. Another plan might be to administer the entering student and nonreturning or former student surveys each year, but to administer the current student, graduating senior, and alumni/former student surveys only to every third year's group of entering students. In this plan, every third year, the institution would have new information concerning graduating seniors, current students, and alumni/former students, but each year they would have up-to-date information about entering students and nonreturning students.

III.

GUIDELINES FOR PLANNING AND ADMINISTERING QUESTIONNAIRE SURVEYS

As defined by A.N. Oppenheim (1973), a survey is a planned data-collection effort for the purpose of description or prediction as a guide to action or for the purpose of explaining the relationships between two or more variables: for example, the relationship between student academic achievement and student performance on a job. While most survey researchers will attest that in practice there are as many purposes as there are surveys, they will also agree that foremost in any survey effort is the development of a clear definition and understanding of the objectives of the survey. To achieve this end, it is essential that the first step to be taken in a survey is the delination and clarification of the specific problems to be studied, the critical questions to be answered, and the possible uses to be made of the survey results. The reason this step is so central to every survey is that once this initial step is accomplished, all of the remaining steps in the survey process are "means to an end" and will flow logically from the purpose of the study identified in this step.

In establishing the purpose of the survey, it is important to obtain input from those persons who will use the findings from the study. Of course, the larger the group of persons from which input is sought, the greater will be the diversity of what may constitute the objectives of the study. Generally, the more objectives a study has to accomplish, the greater its complexity and cost. Therefore, it may be critical to set priorities as to the objectives that will be most important to achieve, given certain time and monetary constraints.

In addition to identifying the specific purposes or objectives of the survey in this initial step, two other key questions should be considered:

- *What concepts need to be defined before the survey process continues?*

In the formulation of any survey effort, certain concepts are used to communicate and organize one's thinking relative to the problems or questions in focus.

For example, in a survey of former students one question of interest might concern their satisfaction with their vocational preparation. What is meant by the concepts, "satisfaction" and "vocational preparation," in this context needs to be translated into specific terms so everyone clearly understands what constitutes the acceptable indicators of these concepts.

- *What assumptions will be made?*

In many surveys it is impossible to control all elements of the survey, such as the validity of certain parts of a questionnaire or the adequacy of the sample. Therefore, formulating the assumptions of a survey is an important consideration since they may affect the survey process as well as the interpretation of the survey result.

Institution-Wide Involvement

As was mentioned above, many different institutional personnel and constituencies may have an interest in the development and results of a questionnaire directed at students in the institution. One vehicle for involving institutional staff and other interested groups is to establish a committee in order to facilitate the administration of the questionnaire and its use within the institution. Not only can a committee of this type be used to make recommendations concerning the administration and use of the questionnaire, but also to modify the questionnaire according to institutional desires. Representatives from the following institutional offices may have an interest in student outcomes surveys: Student Services, Alumni Development, Admissions, Career Placement, Academic Administration, Vocational Administration, Data Processing, and Public Information. In addition, students, faculty, and alumni may be appropriate to include on the committee. It may not be possible to include all of these representatives on the committee, but their involvement in certain stages of development will help ensure good response rates as well

as facilitate actual use of the questionnaire results. In addition, the involvement of a number of institutional personnel will guard against overlapping activities being conducted in a number of different areas within the institution. Frequently, especially in large institutions, redundant or overlapping survey efforts are conducted in several institutional offices, wasting time and money.

Questionnaires and Cover Letters

The questionnaires developed by NCHEMS are published as *Student Outcomes Questionnaires: Community College Series* (Renkiewicz and Bower, 1977) and *Student Outcomes Questionnaires: Four-Year College and University Series* (Bower and Renkiewicz, 1977). It should be noted that items that are essentially the same in each of these questionnaires have been phrased identically to facilitate comparisons across questionnaires.

A question frequently asked by those reading the questionnaires for the first time is whether certain items are actually necessary, since the institution often has the same information on its master file records. These items include: sex, ethnic category, grade-point average, major field, length of enrollment, and others, depending on institutional records and specific questionnaires. A valid argument in favor of not including these items is that the questionnaire can be shortened, which sometimes encourages a better response rate from students. Unfortunately, most institutional master file records are either lacking these data items on substantial percentages of students and/or are inaccurate or out of date for significant percentages of students. Furthermore, deleting them from questionnaires necessitates matching questionnaires to master file records before proceeding with analyses. Not infrequently, difficulties arise in matching returned questionnaires to master file information. If accurate matches cannot be made for every returned questionnaire, valuable analysis capabilities may be lost for certain respondents.

Cover letters for the initial mailing of the questionnaires and for subsequent follow-up

mailings to those who did not respond to the first mailing should be sent or handed to students with the questionnaires, explaining the purpose of the survey and how the results will be used. These letters should be printed on institutional stationery and, if possible, be signed by the president. Whatever the final wording of the cover letters, several important points should be made:

- The letter should convey the importance of a response from the student.
- The letter should state that responses will be confidential.
- The letter should emphasize the value to the student in responding to the questionnaire.
- The letter should not "talk down" to the student.
- The follow-up letter should re-emphasize that responses will be kept confidential and the importance to the institution of receiving as many completed questionnaires as possible.

Sampling Considerations

In every survey, the question must be asked: Should the institution survey all students or will a sample of students suffice? And if an institution elects to use a sample of students, how should the sample be selected, and how many students should be in the sample? Again, the answers to these questions will ultimately have to be decided by staff at individual institutions. There are several factors that should be considered, however.

First, for a variety of reasons, the total population of students should actually be surveyed if at all possible. Surveying the entire population avoids the necessity for restrictive assumptions about that population's responses, increases the reliability of the information received, and provides a hedge against the inevitably less-than-perfect response rate. Surveying the total population also eliminates the need for random sampling or any similar procedure to identify which specific individuals within the population are to receive the questionnaire.

Because administering questionnaires to all students is costly, particularly for large

schools, some institutions may not be able to survey all students. One compromise that might be made is to survey all entering students to obtain baseline data, and then to select random samples of students from this population for administration of later surveys. If longitudinal data are desired, however, the first such random sample must be followed throughout the course of the data collection plan. If an institution does decide that a survey of the total population is infeasible and/or undesirable, the survey can be restricted to a sample of the total population. However, careful procedures must be followed to ensure that the sample is large enough to permit valid inferences about the total population. The initial sample size for entering students also must take into account the number of students available for surveying in subsequent years, if the data collection plan is intended to be longitudinal. Those interested in more detail concerning the factors involved and/or alternative procedures may wish to consult the following resource documents: Mendenhall et al, *Elementary Survey Sampling* (Wadsworth, 1971), a good introductory treatment, or Cochran, W.G., *Sampling Techniques* (Wiley, 1973), more technically sophisticated. Probably the easiest reliable method for choosing a sample of students, if the institution decides to sample, is to select a simple random sample of students.*

Whether the institution chooses to survey the entire population or a sample, it is important that as high a response as possible be obtained. One aim of every survey is to be able to generalize from returned responses to the entire population of students of interest. As significant numbers of surveyed students fail to respond, response bias occurs, and the

ability to reliably generalize to the entire population on the basis of returned questionnaires deteriorates. Generally, response bias operates such that those who complete questionnaires will be more positive toward the school and have stronger opinions than those who fail to respond. Response bias and strategies for increasing response rate are each discussed in more depth in subsequent sections of this manual.

Costs, Materials, and Personnel

Figure 4 shows a list of materials required for the initial contact in mail and hand-out surveys along with estimated costs of each. Estimated costs are based on a survey of 1,000 students; surveys of larger or smaller numbers of students should be approximately proportional in cost to those shown. Most costs should be self-explanatory in Figure 4, except perhaps the first class mailing expense. There is considerable evidence in the survey research literature that personalizing the survey materials increases the response rate substantially. (See Linsky, 1975 for a good overview of this body of literature.) In particular, studies have shown that using first class postage, particularly commemorative stamps, is especially effective in increasing (as much as 10 percent) the response rate (Hensley, 1974, and Champion and Sear, 1969). Because a good response rate is very important in surveys, it is felt that the added expense of first class postage over bulk rate is justifiable on the outside mailing envelopes. First class mail has the added advantage of being forwarded by the post office. Hensley also showed that it is important for the inner return envelope to be different from the outer mailing envelope, and that the least expensive choice, a business reply printed return envelope, achieves the highest response rate when combined with the commemorative stamp outside.

One study (Rossman and Astin [1974]) obtained results showing that nonprofit permits on the outer envelope combined with first class postage to the nonprofit initial mailing of undeliverables yielded response rates that were only .2% to 3.0% less than the first class mailing method. Thus an institu-

*An easy method for randomly selecting students using the computer is to decide on the percentage of students to be sampled, then convert this percentage, say 20 percent, to a fraction (.20), the computer can then be programmed to generate a random number (uniformly distributed over the interval zero to one) for each student record or ID as it is read. If the random number is less than or equal to the fraction, the student is included in the sample, and if larger than the fraction, the student is excluded from the sample. Student records for those included in the sample can, during the execution of this program, be written to a new file for later use. This method can be done also without the computer using a table of random numbers.

Figure 4
**ESTIMATED COSTS* OF MATERIALS FOR INITIAL
 MAIL OR HAND-OUT CONTACT OF 1,000* STUDENTS**

Materials	Number	Explanation	Estimated Costs		
			First Class Mail	Nonprofit Permit Mail	Hand-out
Questionnaires	1,000	Estimated at \$.05	\$50.00	\$50.00	\$50.00
Cover Letters	1,000	Printed on official stationery	10.00	10.00	10.00
Return Envelopes	1,000	Business reply return envelopes (a) Printing costs (b) Postage costs @ \$.15 each x 300 returned	15.00 45.00	15.00 45.00	
Mailing Envelopes	1,000	Standard business size	15.00	15.00	
First Class Postage	1,000	First class commemorative stamps @ \$.13	130.00		
Nonprofit Permits with First Class Postage for Undeliverables	1,000	(a) Nonprofit permits @ \$.02 (b) Estimated 10% undeliverables @ \$.13		20.00 13.00	
TOTAL			\$265.00	\$168.00	\$60.00
Per Student Contact Costs			\$ 26	\$ 17	\$ 06
Per Student Response Costs (estimating 300 responses)			\$ 88	\$ 56	\$ 20

*As of 1977

**Estimated costs for more or fewer than 1,000 students should be approximately proportional

tion may want to consider using non-profit permit postage on the outer mailing envelope and first class postage only for those envelopes returned undeliverable by the post office. There will probably be increased personnel time required to monitor the returned envelopes and address and send out new envelopes, but for many institutions, extra staff time is more readily available than extra sources of funds.

Other mailing costs not shown in Figure 4 are those required for either typing names and addresses of students on the envelopes or generating computer printed name and address labels. These costs will vary depending on the institution, but should be included in cost estimates for the survey. At least one study by Carpenter (1974-75) showed that personalizing the cover letter by manually typing names and addresses increased the response rate, though not greatly, over computer- or machine-produced names and addresses. One would expect, therefore, that the same or less of an effect would occur with typing versus machine-produced envelope addresses; thus if all other factors are equal, typing the students' names and addresses would probably be preferred. If the institution can produce the computer-generated labels at a substantial cost savings and is looking for ways to cut the cost of the survey, however, then computer-produced labels are a reasonable alternative.

The other costs incurred in conducting a survey are primarily personnel costs. It is difficult to put dollar amounts on these costs because they will vary from institution to institution depending on salaries and time invested by various people. The following list of potential personnel requirements is given without estimated costs:

- Survey administrator
- Secretarial time for typing questionnaire and cover letter drafts and final copies
- Computer personnel time for creating survey sample lists and address labels (or clerical time if lists are created by hand, plus typist time for typing envelope names and addresses)
- Approximately 20 hours of clerical time

for stuffing and mailing each 1,000 questionnaires

- Clerical time for recording and tracking returned questionnaires
- Keypuncher time for punching responses to returned questionnaires
- Computer-data analyst time for analyzing returned questionnaires
- Report-writer's time
- Secretarial time for typing report.

Mailing and Hand-Out Guidelines

Mailing. The initial mailing of questionnaires can begin as soon as all the materials listed in the previous section are assembled (the questionnaire, cover letter, two kinds of envelopes, address labels, and postage) along with a list (in the same order as the address labels or typed addressed envelopes) of each student's ID number, name, and address. This list can, and probably should, be the survey status list shown in Figure 5. The process of stuffing and preparing the materials will take approximately 20 person-hours for each 1,000 questionnaires.

After the initial mailing has been completed, a set of tracking sheets should be prepared for recording the status of the questionnaires as they return. Figure 5 shows a sample tracking sheet. If institutional records are computerized or if names and addresses of students were keypunched to produce labels, these tracking sheets can be produced by the computer; otherwise, they must be typed. The tracking sheet should contain:

1. Student's ID number
2. Student's name
3. Student's address
4. Blank columns for recording the date any of the following information was received:
 - a. Date returned by post office as undeliverable
 - b. Date unusable questionnaire returned or letter received; student ineligible or unable to respond (student improperly identified for sample, refuses to respond, deceased, and so forth)
 - c. Date usable questionnaire returned.
5. Blank columns for recording second

Figure 5
SUGGESTED FORM FOR LISTING OF
SAMPLE AND SURVEY STATUS

ID	NAME	ADDRESS	FIRST MAILING			SECOND MAILING		
			UNDELIVERABLE	UNUSABLE	USABLE	DATE SENT	UNDELIVERABLE	UNUSABLE

mailing information:

- a. Date second set of materials sent
- b. Date returned by post office as undeliverable
- c. Date unusable questionnaire or letter received; student ineligible or unable to respond
- d. Date usable questionnaire returned.

Figure 6 shows a tracking sheet with examples of entries by the school.

As questionnaires are returned, one person should be in charge of recording the above information for each student. Some kind of identifying mark (such as a check [✓]) should be placed on each questionnaire as the proper information is recorded on the tracking sheets. It is a good idea, also, to save all returned materials (even undeliverable questionnaires) until the end of the survey.

Handout. For surveys of students on-campus, handing out the questionnaire is the preferred distribution method. As Figure 4 shows, the cost of handing out materials is substantially less than mailing. In addition, the response rate is likely to be higher with a handout survey, perhaps because it seems more personal. The circumstances under which the handout method is applied will vary according to the type of survey being administered and institutional variables. A survey of graduating seniors at a medium- to large-size institution might best be handed out along with required graduation materials. A survey of students in progress at a small school might be given to students by instructors in individual classrooms. Entering Student Questionnaires at a community college could be handed out with registration materials.

Whatever the circumstances of questionnaire distribution, two cautions should be borne in mind. (1) Care should be taken that the use of a particular distribution site does not bias the response. If the placement office, for example, is the only location where the questionnaire is available, the respondents will consist only of those who are seeking a job. (2) While it is perhaps appealing in some respects, students should not be told or be left with the impression that they are required to

complete the questionnaire in order, for example, to graduate. Responses obtained from unwilling or resentful students may be deliberately inaccurate or erroneous.

Follow-Up Mailing Strategies

There is unequivocal evidence that follow-up activities do increase response rates in mail surveys. (See Etzel and Walker, 1974; Hinrichs, 1975; and Wiseman, 1973.) There is also good evidence that a cash reward increases the rate of return. (See Hackler and Bourgette, 1973; Huck and Gleason, 1974; and Wiseman, 1973.) A selected bibliography by Marshall and Gee (1975) and an article concerned with stimulating responses to mailed questionnaires by Linsky (1975) both provide up-to-date, in-depth information about techniques for maximizing response rates in surveys. Rather than review here various methods and their pros and cons, several strategies appropriate for outcomes studies and consistent with recent research will be given for increasing response rates through follow-up activities.

Two mail follow-up variations for increasing response rates are suggested here, varying principally on the amount of money the institution is willing to spend. Figure 7 shows estimated costs for the two possibilities:

1. Duplicate set of materials
2. Duplicate set of materials with a dime

(Each of these follow-up possibilities may also use first class or nonprofit permit postage; Figure 7 thus includes four follow-up strategies.)

There are certainly many combinations of follow-up techniques possible. These two were selected as most appropriate given research findings and budgetary considerations at most institutions of higher education. The evidence is equivocal as to the efficacy of sending out a complete duplicate set of materials rather than a simple follow-up letter or a postcard reminder. One study by Etzel and Walker (1974) found that a letter with duplicate questionnaire and return envelope materials did not increase the response rate over the follow-up letter without duplicates. The

Figure 6
EXAMPLE OF LISTING OF WESTERN COLLEGE
SAMPLE AND SURVEY STATUS

ID	NAME	ADDRESS	FIRST MAILING			SECOND MAILING		
			UNDELIVERABLE	UNUSABLE	USABLE	DATE SENT	UNDELIVERABLE	UNUSABLE
0122356	Mark Andrews	314 W. 8th Ave. Norfolk, VA 10823			2/9			
9262230	Alice Byers	Apt. 3B 9815 Maryland Ave. Los Angeles, CA 98122				2/15		
1135976	Robert Davis	213 E. 11th Street New York, NY 10220				2/29		3/15
26391120	John Edwards	Via Gregorio Allegri Rome, Italy						
4399178	Susan Ford	91 Brand Drive Rockaway, NY 11691			2/11			
2123947	David Harris	123 Table Mesa Drive Boulder, CO 80303				2/14		

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Figure 7
ESTIMATED COSTS* OF MATERIALS FOR FOUR TYPES OF
FOLLOW-UP MAILINGS TO 700 STUDENTS**

Materials	Number	Explanation	Estimated Costs			
			First Class Mail		Nonprofit Permit Mail	
			No Dime	Dime	No Dime	Dime
Questionnaires	700	Estimated @ \$ 05	\$35 00	\$35 00	\$35 00	\$35 00
Cover Letters	700	Printed on official stationery	10 00	10 00	10 00	10 00
Return Envelopes	700	Business reply return envelopes (a) Printing costs (b) Postage costs @ \$ 15 each x 200 returned	15 00 30 00	15 00 30 00	15 00 30 00	15 00 30 00
Mailing Envelopes	700	Standard business size	15 00	15 00	15 00	15 00
First Class Postage	700	First class commemorative stamps @ \$ 13	91 00	91 00		
Nonprofit Permit	700	@ \$ 02			14 00	14 00
Dime	700			70 00		70 00
TOTAL			\$196 00	\$266 00	\$119 00	\$189 00
Per Student Contact Costs			\$ 28	\$ 38	\$ 17	\$ 27
Per Student Response Costs (estimating 200 responses)			\$ 98	\$ 1 33	\$ 60	\$ 94

* As of 1977

** Costs in this figure based on an initial return of 300 questionnaires, leaving 700 for the second mailing

study by Rossman and Astin (1974), however, in which respondents were actually college students, found a significantly lower response rate when no duplicate materials were sent. It is recommended, therefore, that a duplicate set of materials be sent to non-respondents.

The second follow-up procedure recommended here is a duplicate set of materials with a dime enclosed. Cash rewards (even as little as a dime) have been found effective in increasing response rates beyond the increase due to a letter and questionnaire alone. (It has been suggested that a monetary reward tends to make respondents feel bad about accepting the money without giving anything in return.) If the extra expense of the dime can be borne by the institution, this method is preferable to the duplicate set of materials without the dime because it will result in a greater number of responses. It should be noted that the cash reward is recommended only for the follow-up mailing (not the initial mailing) because there is good evidence (see Hackler and Bourgette, 1973, and Huck and Gleason, 1974) that a monetary reward need only be given to nonrespondents after the first mailout.

There is one more type of follow-up activity, a telephone reminder, that is also quite effective in increasing the rate of return of questionnaires. This method is appropriate for an institution that serves mainly an urban area where most students can be reached, even after leaving the school, by a local call. If this condition is met and the institution has available staff to make the calls, the cost of this method will be less than a second wave of questionnaires and almost certainly will be more effective.

Staff at individual institutions will have to decide which of the three main follow-up strategies (or some combination of them)

given in the discussion above is best for them. The important point is to plan for and carry out some kind of follow-up activity.

Checklist of Survey Planning and Administration Activities

The following is a checklist of the activities required to prepare for and conduct the student outcomes surveys outlined in this *Handbook*:

1. Decide on the objectives of the survey.
2. Write out a plan and schedule for the entire survey.
3. Study the appropriate questionnaire to ensure that it will provide data appropriate for the survey objectives.
4. Meet with a committee of potential institutional users of the survey results to discuss the survey objectives, plan, schedule, and questionnaire.
5. Decide whether to survey all students in the population or a sample of a specified percentage.
6. Set up a method for identifying students in the population; if sampling is to be done, also set up a method for randomly selecting students from the population.
7. Produce a typed or computer-printed list of all students to be surveyed. If using the computer, also generate a computer file of all students in the survey.
8. Prepare survey materials (questionnaires, cover letters, follow-up materials, mailing envelopes, return envelopes, postage, address labels, tracking sheets).
9. Prepare a set of follow-up procedures.
10. Hand out or mail the questionnaires.
11. As questionnaires are returned, record appropriate information on tracking sheets.
12. Implement the follow-up plan to maximize response rate.

IV.

CODING AND DATA PROCESSING GUIDELINES

Once the questionnaire has been administered and responses received, the next step in the survey is to prepare the returned questionnaires for analysis by visual editing, hand coding where necessary, and, finally, keypunching. This section of the manual provides guidelines for each of these steps as well as suggestions for computer editing of responses, matching the keypunched questionnaires to existing computer master files, and suggestions about useful statistical/data manipulation packaged computer programs. At present, no computer software exists for editing or analyzing the Student Outcomes Questionnaires.

Hand Coding and Visual Inspection of Returned Questionnaires

It is generally a good idea to inspect a handful of returned questionnaires visually before having them keypunched to ensure that students followed directions and that no consistent problems occurred in the kinds of responses received for each questionnaire.

There are several write-in items on the NCHEMS Student Outcomes Questionnaires, which institutions may want to hand code before keypunching so that responses to these items can be tabulated along with other responses. The most important write-in questions (student's major while at the institution [on all eight questionnaires], student's first occupation after graduation, student's college or university name and program in his/her first educational program after graduation [on the Recent Alumni and Follow-Up Questionnaires]) have keypunching columns and space allotted on the questionnaires for numerical codes to be assigned and keypunched. Other items (such as student's write-in responses to any difficulties in transferring to a new school in the Series B Follow-Up Questionnaire) do not have assigned keypunch columns on the questionnaires. Institutions may assign codes and allot card columns for such items if they wish to tabulate these questions. The appendix con-

tains various codes for major fields and occupations. Codes for colleges and universities attended by students can be developed by each institution or the Federal Interagency Committee on Education identification codes can be used. (These codes are listed in the *Education Directory, Colleges and Universities, 1975-76*.)

All hand coding should be done by a person who has been given explicit coding instructions. The coder should also be told to set aside all questionnaires for which there are ambiguous responses so that the survey administrator can make decisions for these responses.

Keypunching

The Student Outcomes Questionnaires each require one card per respondent, except for the Series B Former Student Questionnaire which requires two cards. Keypunching codes and column numbers have been designated on the questionnaires. It is a good idea to have the cards verified by the keypuncher; verification will nearly double the cost of keypunching, but will eliminate many punching errors. If possible, the keypuncher should be instructed to call the survey administrator about any ambiguities he or she finds while punching the responses.

Computer Editing

In the process of any questionnaire survey, mistakes are bound to occur in recording responses. These errors may be the student's in not following directions, the hand coder's, or the keypuncher's. There are two basic kinds of errors that can be detected by editing using the computer:

1. Responses may be out of acceptable ranges for an item. For example, one or two students may have sex codes of 3. This type of error can be detected by inspection of a preliminary frequency distribution of all responses to the questionnaire for all students using a package program such as the Statistical Package for the Social Sciences (SPSS).

Alternatively, a special computer program can be written that checks for out-of-range responses to each item for each questionnaire and prints a message when an error is found. Correction of errors consists of locating the original questionnaire for which an error occurred, and then correcting the appropriate card columns.

2. Logically inconsistent responses may be found among pairs or sets of responses to the questionnaire. One such inconsistency is a student responding to a "Degree sought" item with "doctoral degree," for example, and also indicating that he or she is a sophomore. These types of errors can be detected only by a special program written to compare pairs or sets of responses for each student, and programmed to write an error message when an inconsistency occurs. Correction consists of changing the key-punched cards after checking with the original questionnaire to see what the correct responses are. In many cases, these types of errors exist even on the questionnaire (because the student made a mistake in responding to an item). If this is the case, a judgmental decision must generally be made as to which response is correct, and other responses changed to "blanks" or "no response" by deleting responses from the appropriate card columns.

From the above editing suggestions, it can be seen that it is important to keep the original questionnaires sorted in the same order as the cards, generally in student ID number order. By keeping the questionnaires sorted, it will always be easy to find quickly a particular questionnaire needed for editing verification or any other purpose.

Matching Questionnaire Data to Master File Data

If the institution has a computerized master file of the sample of dropouts with student information that is desired to match with the questionnaire information, a computer program can be written to accomplish this.

Both files must be sorted in the same order. It is a good idea to match corresponding records with as much information found on both files as possible. That is, if student ID, date of birth, and sex code are on the master file (as well as on the questionnaire), then all duplicate information must match before a match of the two records is considered correct. By using additional duplicate pieces of information to match records, the possibility of matching errors caused by incorrectly punched ID numbers will be minimized. Where incorrect ID numbers are found on questionnaires, a resolution of the errors must be made by reference back to the original questionnaires, followed by correction of the cards. The resulting matched information can be stored as a new card for each respondent or all information can be stored on tape or disk as one record for each respondent.

For certain purposes, primarily related to checking response bias, the institution may also want to create a new master file containing codes for all types of responses received from students. The kinds of information that might be desired are:

1. Usable questionnaire returned
2. Student excluded from sample because of improper or foreign permanent address
3. Student deceased
4. Questionnaire returned by post office as undeliverable mail
5. No questionnaire returned
6. Unusable questionnaire returned.

Other codes can be added as appropriate for particular surveys. In an attrition survey, for example, mistakes might be made in separating graduates from nonreturning students. A seventh code can then be added for those students who send explanatory letters back:

7. Student graduated.

These codes can be added to the master file by punching a card for each student who can be identified as code 2., 3., 4., 6., or 7. containing the student's ID number and the appropriate code and matching these cards against the master file. Code 1. (usable questionnaire returned) can be added to the

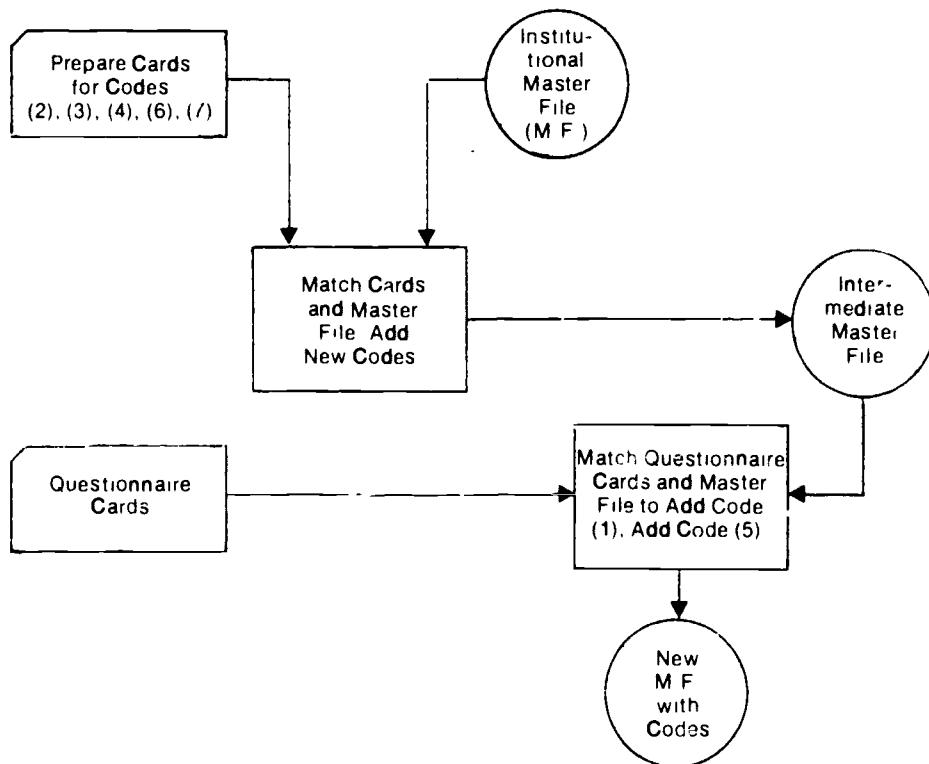
master file by matching the questionnaire cards against the master file. Code 5. is then defined as all master file records that do not have a code. Figure 8 illustrates this procedure.

The analyst may now use the new master file with codes to describe similarities and differences among various coded groups. In particular, it is often useful for assessing response bias to compare master file information between respondents and non-respondents.

Packaged Computer Programs

There are two main functions for which packaged computer programs are needed in student outcomes surveys. One is for manipulation of the data and selection of subsamples; the other is for actual analysis of the data. There are two commercially available packaged computer program systems that each perform both functions. They are OSIRIS (1973) and SPSS (1975). A third set of packaged programs is BMD (1973), although this package has limited utility in performing data manipulation and subsample selection functions.

Figure 8
**FLOWCHART OF STEPS REQUIRED TO IDENTIFY STATUS OF
ALL STUDENTS IN SURVEY**



V. DATA ANALYSIS

The data analysis phase of almost any survey, including student outcomes surveys, consists of a basic core of descriptive statistics (frequencies, percentages, means, standard deviations, and so forth) summarizing the questionnaire responses combined with as much or as little additional statistical analysis as time, money, and interest permit. In addition to basic questionnaire analyses, the data analysis phase often includes an assessment of the degree of response bias that may exist in the group of students who chose to respond to the questionnaire when compared to the rest of the sample who chose not to respond. This section on data analysis, therefore, presents guidelines for performing basic descriptive statistical analyses of the questionnaire and assessing response bias. Also included is a brief discussion of potential analyses that go beyond the descriptive stage.

Basic Descriptive Analyses

Basic descriptive analyses of the returned questionnaire responses usually consist of frequencies (counts) and percentages of the number of students who responded to each option of each question. Percentages for each questionnaire item should be calculated using the total number of actual respondents (excluding those who left the item blank) as the base. The percentage of nonrespondents for each item is calculated by dividing the number of nonrespondents by the total sample of returned questionnaires. Thus, each item should be tabulated similarly to the example given here for race/ethnic identification of respondents (351 returned questionnaires):

6. Race/Ethnic Identification

N	%	
2	0.6	(1) American Indian or Alaska Native
5	1.5	(2) Asian or Pacific Islander
51	15.0	(3) Black
13	3.8	(4) Hispanic
270	79.2	(5) White
0	0.0	(6) Nonresident Alien

341 100.0* TOTAL

10 nonrespondents (2.8%)

*Because of rounding error, column does not total 100.0

Note that, as was the case in the above example, the percentages for each response category may not total exactly 100.0 percent. The usual procedure for dealing with this occurrence is to record 100.0 as the TOTAL percent and with an asterisk and corresponding footnote indicate that the individual percentages may not total 100 percent because of rounding error.

For questionnaire items that have an underlying scale, it is appropriate to calculate the mean, standard deviation, and median response. Examples of such items include number of terms enrolled, number of months since withdrawal, number of hours employed per week, grade-point average, and number of changes of major. In addition, for rating scales (such as reasons for leaving and satisfaction with various aspects of the institution), means and standard deviations can be calculated. The means for each subpart of these questions can be interpreted as weighted measures of the importance of a particular item such as reason for leaving or degree of satisfaction with various aspects of the institution across all students. The standard deviations are measures of the variability or dispersion of the students' responses to each subpart. The means for these types of questions are particularly useful for quickly evaluating the relative importance of each subpart in relation to other subparts. For example, mean responses to the employment subsection of the reasons-for-leaving items on the Nonreturning Student Questionnaire might be 1.3, 1.1, 1.0, and 2.0 for the four subparts, respectively. Two conclusions can be drawn from these results: (1) employment problems range from "not being a factor" to being a minor factor in students' reasons for leaving school for those who responded to the survey; and (2) the fourth subpart, "Couldn't find a job while at school," with a mean of 2.0 is a more important reason why students left the institution than any of the other three employment reasons.

*Assuming 1 = not a reason, 2 = minor reason, 3 = moderate reason, and 4 = major reason.

All the basic descriptive analyses suggested above can be done not only for the total sample of respondents but also for various subgroups of the sample that may be of interest to analyze separately. Subgroups that are frequently of interest are:

- males and females
- ethnic groups
- students' goal—degree, certificate, or neither (for community colleges)
- undergraduates and graduates for four-year colleges and universities
- degree types for graduate students
- full-time and part-time students
- employed and unemployed students
- major field or program

Assessing Response Bias

Response bias exists when the students who choose to respond to a questionnaire survey differ systematically from the total sample of students who were sent questionnaires. Generally, response bias operates such that actual respondents tend to be more concerned, more interested, or more enthusiastic than those who choose not to respond to a survey. Respondents may also have stronger views and may have more positive feelings about school in general than nonrespondents.

There are two general approaches in survey research to the problem of assessing response bias. One approach is to isolate a small random sample of nonrespondents to the survey and make every effort to get valid returned questionnaires from this group for comparison with those who originally returned questionnaires. Usually this approach is not feasible, primarily for cost reasons, in any but the largest surveys. Another approach, which can easily be done in a small survey effort, is to examine the characteristics of respondents and nonrespondents using demographic/background data available in the institutional master file records. Though this approach is technically less valid, it can produce useful insights into the response bias question. Typically, institutions have in their records such information as:

- sex
- ethnic category
- home state
- age
- degree sought
- major field
- grade-point average
- number of terms enrolled
- date of withdrawal (if appropriate)
- date of graduation or program completion (if appropriate)

An assessment of difference between respondents and nonrespondents for these types of characteristics can be made by comparing percentages and means for the two groups. For example, the respondents may be 56 percent women while nonrespondents are 49 percent women, and the average age may be 19 for respondents and 22 for nonrespondents. In many cases, the differences may be negligible between the two groups indicating little response bias at least in terms of the characteristics on which the students were compared, but in some cases there will be moderate to substantial differences between respondents and nonrespondents. The important point in investigating the response bias question is to document any comparisons that were made between the two groups and to exercise caution in interpreting questionnaire results to the extent that it is believed respondents may represent a biased group.

Other Data Analyses

There are numerous analytical directions for using the questionnaire data that might be pursued beyond the basic descriptive analyses suggested here. These include cross-tabulations of items, intercorrelating items to investigate relationships among variables, building predictive models (perhaps using multiple regression techniques), and testing hypotheses. These analyses will not be discussed here because they generally require considerable training in statistics and data analysis that is beyond the scope of this Handbook to discuss.

VI. USING THE SURVEY RESULTS

Use of the information is perhaps the most important element in the administration of any survey. It is, unfortunately, not uncommon for institutions to collect survey data and then never publish a report or otherwise attempt to disseminate the survey results. Not only is this outcome a waste of valuable time and money, but also it contributes to understandable reluctance on the part of students and others involved toward the whole activity of conducting surveys. It is incumbent on the survey coordinator, therefore, to disseminate the survey results to all levels of potential users (from students to president) not only to ensure that the data at least have the potential to be used, but also to encourage positive attitudes about the value of student outcomes information.

Identifying the Users

With any survey instrument, it is important to identify who the key users will be and what the level of their use will be. If an institutional committee was formed at the beginning of the survey, then half this task is accomplished, because, presumably, key users or their representatives served on the committee. One way of identifying the level of data use of various users is to list the titles of various types of potential users on one side of a page and list beside each title possible uses of the information by each administrator.

What Information Should Be Provided

Deciding what specific pieces of information may be useful to particular administrators is not an easy task. A good place to start is by determining the major responsibilities of each potential user and then gearing the information to fit his or her particular responsibilities within the organization. For example, the president, in many institutions, has global responsibility for the institution as it relates to the external world, the general public, the legislators, board of directors, and so forth. It generally would not be appropriate, therefore,

to give the president detailed information related to each department within the institution. It would be more appropriate to develop a report for the president that would give general indicators related to the success and/or failure of the institution. The academic dean, on the other hand, might be interested in departmental breakouts but would want the data summarized and arrayed so that comparisons between departments were readily apparent. Finally, the department chairperson may not be concerned with indicators that relate to the entire institution but rather with indicators relating specifically to the department, including some notion of how his or her department compares to others within the institution.

Reports also should be of appropriate length for various users. In general, the higher the administrator's level, the shorter the report should be. There is a fairly universal tendency for those producing the reports to include too much detail and to get so involved with the many "interesting findings" that all of them are reported. Reports to top-level administrators should be especially brief (one to two pages); if something in the brief report is of particular interest to them, they can easily request further detail.

Providing a truly useful report takes time and experience. The person preparing the report should solicit, and will usually get, feedback from the users about the information that was particularly useful in the prepared report. This feedback can be used to modify and improve future reports. It also may be helpful to ask the user what he or she specifically wants out of the report before beginning to write. Frequently, however, this process can be frustrating to both the user and the report writer because it is difficult to identify ahead of time specific needs from the report when one is not familiar with the data.

Sample Reports from A Student Outcomes Survey (Bower, 1977) provides two examples of reports from an actual pilot-test commun-

ty college study of Former Students. The first report is a three-page executive summary, and the second report is the actual full research report summarizing the results of the study.

Making Decisions Based on Information

Not only is it important that users *receive* information that is displayed in a meaningful manner, but also it is equally important that they are able to *use* the information to effect positive changes within the institution. This process occurs most naturally when the results of a survey reinforce the perceptions of the decision makers.

For example, suppose a Dean of Students believed that, in terms of students' needs, counselors were spending too much time with students' personal problems and too little time with career counseling. A survey of students might indicate that many students were not aware of the career counseling services, but would use them if available, while relatively few students felt a need for and planned to use the personal counseling services. Staffing information might collaborate this by indicating considerably more time spent in personal counseling than career counseling (perhaps because personal counseling takes more time per student served). These two pieces of data combined may then be enough motivation for the dean to take the initiative in effecting a change in the counseling program at the institution.

Sometimes financial distress coupled with new information causes change within an institution. At one small private college, an entire student major program was phased out because it was shown that only a handful of students were graduating from the program, and, therefore, that it was not a cost-justified program. The faculty who were teaching in the program, when presented with the financial distress information along with the student information, were able to recommend

that the program be phased out and the department only be maintained as a service department.

It should not be expected that every questionnaire survey will cause widespread change. Students' questionnaire responses may only be the first piece of information in an area that may in the future need to be changed; or students' responses may, in many cases, document a high satisfaction with the status quo.

Feedback to Respondents

One reinforcing technique that can be used to encourage better participation in questionnaire surveys is showing the respondents how the results have been used. Providing student feedback is particularly easy with on-campus questionnaires, such as entering and current student surveys, but also can be done with students who are off-campus, such as graduating seniors, alumni, and other former students. Most students will have particular interest in any changes in college or university policies or practices resulting from the survey as well as an interest in the general survey results. Feedback is especially important for graduating seniors and alumni because one of the objectives of contacting them is to maintain their interest in the college so that they will be encouraged to provide financial and other support. If alumni and graduating seniors feel that their responses are influencing changes in the institution, they are likely to feel more actively involved in the institution. The same result is likely to occur with on-campus students in terms of a more positive attitude toward the school. Thus, when change does occur, it is especially important to report that change to the group that has helped bring it about. And even when change does not happen as a result of a survey, it is important to at least provide feedback of the general survey results to the respondents.

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APPENDIX

OCCUPATIONAL TITLES AND CODES FROM THE ASSOCIATED COLLEGES OF THE MIDWEST, SURVEY OF 1975 GRADUATES

1 Unemployed (includes attending school)	40 Psychologist (not teaching)
2 Homemaker, full-time (not seeking paid employment)	41 Physician/Psychiatrist, etc.
3 Farming, Fishing, Forestry	42 Physicist (not teaching)
<i>Professional, Managerial, Administrative and Technical</i>	43 Research Assistant
4 Accountant	44 Sales Manager
5 Actor, Actress	45 Sociologist (not teaching)
6 Artist	46 Social Worker
7 Administrative Assistant	47 Teacher, Elementary
8 Administrator, Business	48 Teacher, High School
9 Administrator, Education	49 Teacher, College
10 Administrator, Government	50 Teacher, Special or Other
11 Administrator, Hospital/Health Services	51 Translator
12 Advertising Manager	52 Urban Planner
13 Bank Officer	53 Veterinarian
14 Biological Scientist (not teaching)	54 Writer
15 Business Management Trainee	<i>Clerical and Sales</i>
16 Buyer	55 Advertising Agent
17 Chemist (not teaching)	56 Bank Teller
18 Clergy	57 Bookkeeper
19 Computer Programmer, Scientist, Analyst	58 Computer Operator
20 Counselor, School or Guidance	59 File Clerk
21 Counselor, Career or Employment	60 Insurance Agent
22 Dentist	61 Keypuncher
23 Economist (not teaching)	62 Mail Clerk
24 Editor	63 Messenger
25 Engineer	64 Model
26 Horticulturist	65 Receptionist
27 Interior Design/Decorator	66 Real Estate Agent
28 Librarian	67 Sales (wholesale and manufacturing)
29 Lawyer	68 Sales Clerk
30 Legal Aid	69 Securities Sales
31 Market Researchers	70 Secretary
32 Mathematician/Statistician (not teaching)	71 Statistical Clerk
33 Military Service (officer)	72 Stock Clerk
34 Music Director, Musician	73 Survey Interviewer
35 Newspaper Reporter	74 Travel Agent
36 Nurse, Registered	75 Typist
37 Occupational Therapist	<i>Service</i>
38 Personnel	76 Barber
39 Public Relations/Publicity	77 Bartender
	78 Beautician
	79 Cook
	80 Fire Fighter
	81 Flight Attendant

- 82. Groundskeeper
- 83. Meatcutter (retail)
- 84. Nurse Aid
- 85. Police Officer
- 86. Private Household Worker
- 87. Teacher Aide
- 88. Tour Guide
- 89. Waiter. Waitress

Craftsmen/Operators/Trades

- 90. Assembler
- 91. Auto Mechanic
- 92. Auto Service Station Attendant

- 93. Baker
- 94. Bus Driver
- 95. Construction Worker
- 96. Dental Technician
- 97. Jeweler
- 98. Machine Operator
- 99. Machinist
- 100. Painter/Paper Hanger
- 101. Plumber
- 102. Radio/TV Repair
- 103. Taxi Driver
- 104. Truck Driver
- 105. Welder

**MAJOR/PROGRAM CODES
THE ASSOCIATED COLLEGES OF THE MIDWEST,
SURVEY OF GRADUATES**

- 01 Agriculture and Natural Resources
- 02 Anthropology
- 03 Architecture and Environmental Design
- 04 Area Studies (American, Afro-American, Asian, Latin-American, Slavic, etc.)
- 05 Art
- 06 Biology
- 07 Business and Management
- 08 Accounting
- 09 Business Administration/Management
- 10 Industrial Relations/Personnel
- 11 Secretarial
- 12 Chemistry
- 13 Classics or Classical Languages
- 14 Communications (Advertising, Journalism, Radio/TV, etc.)
- 15 Computer and Information Sciences
- 16 Ecology
- 17 Economics
- 18 Education
- 19 Engineering
- 20 English
- 21 Foreign Languages, Modern
- 22 Geology

- 23 Health Professions (Medical, Dental, Nursing, Veterinary, Hospital Administration, etc.)
- 24 History
- 25 Home Economics
- 26 Law
- 27 Library Science
- 28 Mathematics
- 29 Music
- 30 Philosophy
- 31 Physics
- 32 Political Science or Government
- 33 Psychology
- 34 Public Affairs and Services (Social Work, Recreation Management, Law Enforcement, etc.)
- 35 Religion
- 36 Sociology
- 37 Speech
- 38 Theater
- 39 Urban Studies
- 40 Individually Designed
- 41 Interdisciplinary

NCHEMS
LIST OF OCCUPATIONS AND EDUCATIONAL PROGRAMS

If the appropriate program or occupation is not listed, please use the 999 code and write the program or occupation name in the space provided on the questionnaire.

Q30 AGRICULTURE AND NATURAL RESOURCES

- 031 Agriculture, general
- 032 Natural resources, general
- 033 Agricultural business and economics
- 034 Agricultural and farm management
- 035 Agronomy and horticulture
- 036 Animal, dairy, and poultry science
- 037 Fish, game, and wildlife management
- 038 Food science and technology
- 039 Forestry, natural resource, and range management
- 041 Ornamental horticulture (floristry and nursery science)

060 ARCHITECTURE AND ENVIRONMENTAL DESIGN

- 061 Architecture, general
- 062 Environmental design, general
- 063 Architectural technology
- 064 City, community, and regional planning

090 ASSEMBLY, INSTALLATION, MAINTENANCE, AND REPAIR

- 091 Air conditioning, refrigeration, and heating equipment
- 092 Aircraft and related equipment
- 093 Appliances
- 094 Automotive equipment
- 095 Business machines (including computers and related equipment)
- 096 Diesel equipment
- 097 Electronics equipment, except radio and TV
- 098 Heavy machinery and equipment
- 099 Radio and TV equipment

120 BIOLOGICAL SCIENCES

- 121 Biology, general
- 122 Botany
- 123 Ecology
- 124 Genetics
- 125 Zoology

150 BUILDING AND CONSTRUCTION TRADES

180 BUSINESS, MANAGEMENT, AND COMMERCE

- 181 Business and commerce, general
- 182 Accounting
- 183 Business management and administration
- 184 Hotel and restaurant management
- 185 Labor and industrial relations
- 186 Marketing and purchasing
- 187 Office management and operations
- 188 Personnel management
- 189 Recreation and tourism
- 191 Sales
- 192 Secretarial studies
- 193 Transportation and public utilities management

210 COMMUNICATIONS

- 211 Communications, general
- 212 Advertising, information services, and public relations
- 213 Journalism (printed media)
- 214 Radio and television

240 COMPUTER AND INFORMATION SCIENCES

- 241 Computer and information sciences, general
- 242 Computer and peripheral equipment operations
- 243 Computer programming
- 244 Data processing
- 245 Information sciences and systems
- 246 Systems analysis

270 EDUCATION

- 271 Education, general
- 272 Counseling and guidance
- 273 Educational administration
- 274 Educational research and development (including curriculum)
- 275 Elementary education (including preschool)
- 276 Secondary education (including junior high)
- 277 Higher and other postsecondary education
- 278 Special education

300 ENGINEERING

- 301 Engineering, general
- 302 Aerospace, aeronautical, and astronautical engineering
- 303 Automotive engineering
- 304 Chemical engineering (includes petroleum refining)
- 305 Civil, construction, and transportation engineering
- 306 Drafting and design
- 307 Electrical, electronics, and communications engineering
- 308 Engineering support technologies
- 309 Environmental and sanitary engineering
- 311 Industrial and management engineering
- 312 Mechanical engineering
- 313 Mining and mineral engineering
- 314 Petroleum engineering (excludes petroleum refining)

330 FINE, APPLIED, AND PERFORMING ARTS

- 331 Art and applied design (e.g., ceramics, painting, sculpture, weaving)
- 332 Art history
- 333 Graphic arts (e.g., engraving, etching, lithography)
- 334 Music history, theory, and composition
- 335 Performing arts (e.g., dance, drama, music)
- 336 Photography and cinematography

360 FOREIGN LANGUAGES

- 390 HEALTH SERVICES
- 391 Health services, general
- 392 Dental or medical assistant services
- 393 Dental or medical laboratory technologies
- 394 Dental hygiene
- 395 Dentistry
- 396 Electrocardiograph and electroencephalograph technologies

397 Hospital and health care administration

398 Inhalation therapy

399 Medical records

401 Medicine

402 Mortuary science

403 Nursing

404 Optometry

405 Osteopathic medicine

406 Pharmacy

407 Physical and occupational therapy

408 Podiatry

409 Public health and sanitation

411 Radiologic technologies (e.g., X ray)

412 Speech pathology and audiology

413 Veterinary medicine

420 HOME ECONOMICS AND HOMEMAKING

- 421 Home economics and homemaking, general
- 422 Clothing and textiles
- 423 Consumer economics and home management
- 424 Family relations and child development
- 425 Foods and nutrition (including dietetics)
- 426 Home decoration and home equipment

450 INTERDISCIPLINARY STUDIES

480 LAW

510 LETTERS

- 511 Classics
- 512 Comparative literature
- 513 Creative writing
- 514 English, general
- 515 English literature
- 516 Linguistics (includes phonetics, semantics, and philology)
- 517 Philosophy
- 518 Religious studies (excludes theological professions)

540 LIBRARY SCIENCE

570 MACHINE TRADES

500 MATHEMATICS AND STATISTICS

630 MILITARY SCIENCES

660 PERSONAL SERVICES

- 661 Barbering, cosmetology, and related services
- 662 Food and beverage services
- 663 Hotel and lodging services
- 664 Other personal services

690 PHYSICAL SCIENCES

- 691 Physical sciences, general
- 692 Astronomy and astrophysics
- 693 Atmospheric sciences and meteorology
- 694 Chemistry, general
- 695 Earth sciences, general
- 696 Geology
- 697 Metallurgy
- 698 Oceanography
- 699 Physics, general

720 PSYCHOLOGY

- 721 Psychology, general
- 722 Clinical psychology
- 723 Experimental psychology
- 724 Psychometrics

750 PUBLIC AFFAIRS AND SERVICES

- 751 Community services, general
- 752 Fire protection
- 753 Law enforcement and corrections
- 754 Parks and recreation
- 755 Public administration
- 756 Social work and helping services

780 SOCIAL SCIENCES

- 781 Social sciences, general
- 782 Anthropology
- 783 Archaeology
- 784 Area studies
- 785 Economics
- 786 Ethnic studies
- 787 Geography and demography
- 788 History
- 789 International relations
- 791 Political science and government
- 792 Sociology

810 THEOLOGY

998 UNDECIDED

999 OTHER (please write the name of the educational program or occupation in the space provided on the questionnaire)

Nonreturning Student Questionnaire

1 Name: (please print)

Last _____ First _____ Middle Initial _____

2 Permanent Mailing Address:

City _____ State _____ Zip code _____

3 Student Identification Number:

_____ 1 2 3 4 5 6 7 8 9

4 Sex: (Check one)

10 Female
 Male

5 Race/Ethnic Identification (Check one)

11 American Indian or Alaskan Native
 Asian or Pacific Islander
 Black
 Hispanic
 White
 Nonresident Alien

6 Age: (Check one)

12 Under 18
 18 - 20 years
 21 - 24 years
 25 - 34 years
 35 - 44 years
 45 - 54 years
 55 years and over

7 Please check the number of credit hours completed at this school: (Check one)

13 0 - 5
 6 - 30
 31 - 60
 61 - 90
 91 - 120
 121 or more

8 a. Please write in what your major/program was when you left this school:

b. Check here if you did not have a major/program. 14-1

FOR OFFICE USE			
15	16	17	18

9 What was your cumulative grade point average at the time you left this school? (Check one)

19 1.0 or less
 1.1 to 2.0
 2.1 to 3.0
 3.1 to 4.0

10 Were you ever on academic probation while enrolled: (Check one)

20 Yes
 No

11 Which one of the following degrees were you seeking at the time you left this school? (Check one)

21 Was not seeking a degree - only registered for selected courses
 Associate degree
 Bachelor's degree
 Master's degree
 Professional degree (includes only dentistry, medicine, or optometry, osteopathy, podiatry, veterinary medicine, law, and theology)
 Doctor's degree (e.g., Ph.D., Ed.D., D.B.A.)

12 How long were you enrolled before you left this school? (Check one)

22 Less than one term
 One term, but less than one year
 One year or more, but less than two years
 Two years or more, but less than three years
 Three years or more

13 Were you primarily a full-time (12 hours or more) or part-time student while you attended this school? (Check one)

23 Primarily full time
 Primarily part time

CONTINUED ON
REVERSE SIDE

14 During your last two terms at this school, were you employed in a job for which you received wages? (Check one)

1 Not employed at all
 2 Employed 1 - 10 hours/week
 24-3 Employed 11 - 20 hours/week
 4 Employed 21 - 35 hours/week
 5 Employed 36 hours or more/week

15 Check all the sources of support you used to finance your last two terms of school.

25 1 a Full- or part time work while attending school
 26 1 b Savings
 27 1 c Support from parents
 28 1 d Employer support
 29 1 e Aid from spouse
 30 1 f Grants (Basic Opportunity Grant, Supplemental Educational Opportunity Grant and others)
 31 1 g Loans
 32 1 h Scholarship
 33 1 i GI Benefits, Social Security, and other benefits

16 Please describe in your own words your reasons for leaving this school.

17 Listed below are reasons why a student might leave school. To what extent are these your reasons for leaving this school? (Check one answer for each reason)

Major Reason
 Moderate Reason
 Minor Reason
 Not a Reason

1 2 3 4

Academic

a Low grades 34
 b Found courses too difficult 35
 c Inadequate study techniques or habits 36
 d Needed a temporary break from studies 37
 e Major or courses not available at this school 38
 f Dissatisfaction with major department 39
 g Unsure about my choice of major 40
 h Course work not challenging 41

17 continued

Major Reason
 Moderate Reason
 Minor Reason
 Not a Reason

1 2 3 4

Employment

i Scheduling conflict between job and studies 42
 j Accepted a job 43
 k Went into military service 44
 l Couldn't find a job while at school 45

Financial

m Not enough money to go to school 46
 n Applied, but could not obtain financial aid 47
 o Financial aid was not sufficient 48
 p Child care too costly 49
 q This school was too expensive 50

Personal Circumstances

r Found study too time consuming 51
 s Home responsibilities were too great 52
 t Illness, personal or family 53
 u Personal problems 54
 v Fulfilled my personal educational goals 55
 w Marital situation changed my educational plans 56
 x Moved out of the area 57
 y Child care not available 58

18 How satisfied are you with your experiences at this school in each of the following areas? (Check one answer for each statement)

Very Satisfied
 Somewhat Satisfied
 Somewhat Dissatisfied
 Very Dissatisfied

1 2 3 4

a Your overall impression of general education courses 59
 b Your overall impression of courses in your major program 60
 c The overall quality of instruction 61
 d Availability of courses offered that were of interest to you 62
 e The accessibility of instructors 63
 f Helpfulness of instructors in assisting you with career plans 64

19 How satisfied were you with each of the college services listed below? (If you never used a particular service, check the first column and do not rate the item)

Very Satisfied
 Somewhat Satisfied
 Somewhat Dissatisfied
 Very Dissatisfied
 Never Used This Service

0 1 2 3 4

a Admissions Office Information 65
 b Registration 66
 c Financial Aid Office 67
 d Student Employment Office 68
 e Faculty Academic Advising 69
 f Nonfaculty Academic Advising 70
 g Counseling Center 71
 h Reading, Writing, Math Skills Improvement 72
 i Testing Services 73
 j Career Development/Placement Office 74
 k Cafeteria 75
 l Recreation and Athletic Facilities 76
 m Library 77
 n Health Center 78
 o Housing Facilities 79

20 Please write in the space below the one thing which, if changed for the better, would have encouraged you to stay at this school.

21 What are your current educational plans? (Check one)

1 Have already re-enrolled at this school
 2 Plan to re-enroll at this school within six months
 3 Have already re-enrolled at another school
 4 Plan to re-enroll at another school within six months
 5 Have no plans to attend school within six months

Entering Student Questionnaire

① Name: (please print)

Last _____ First _____ Middle Initial _____

② Permanent Mailing Address:

City _____ State _____ Zip code _____

③ Social Security Number (Student ID):

1	2	3	4	5	6	7	8	9

④ Date: _____ / _____ / _____
 Month 10-11 Day 12-13 Year 14-15

⑤ Campus and Location:

16-17

⑥ Sex: (Check one)

18-
 1 Female
 2 Male

⑦ Race/Ethnic Identification: (Check one)

19-
 1 American Indian or Alaskan Native
 2 Asian or Pacific Islander
 3 Black
 4 Hispanic
 5 White
 6 Nonresident Alien

⑧ Age: (Check one)

20-
 1 Under 18
 2 18 - 20 years
 3 21 - 24 years
 4 25 - 34 years
 5 35 - 44 years
 6 45 - 54 years
 7 55 years and over

⑨ The following are statements that reflect the goals of many students who attend this college. Please check all the goals that apply to you.

21-1 a. To get a certificate or associate degree or license
 22-1 b. To discover my vocational interest
 23-1 c. To prepare for a new career
 24-1 d. To improve my knowledge and technical skills required in my present job
 25 1 e. To increase my chances for a possible raise and/or possible promotion in my present job
 26-1 f. To complete courses necessary to transfer to a four-year college
 27-1 g. To learn specific skills that will enrich my daily life
 28-1 h. To improve my ability to get along with people
 29-1 i. To become actively involved in student life and campus activities
 30-1 j. To increase my participation in cultural and social events
 31-1 k. To improve my confidence in myself
 32-1 l. To meet people
 33-1 m. To improve my leadership skills
 34-1 n. To complete high school (GED)
 35-1 o. To improve my life style
 36 1 p. Other (please specify) _____

⑩ a. Check here if you will not have a major/program or are not sure what your major/program will be. 37-1

b. If you have an intended major/program at this college, please write it in the space below:

⑪ Have you ever attended this college before? (Check one)

38-
 1 Yes
 2 No

If you have attended this college before, you are now finished with the questionnaire. If you have not attended this college before, please continue on the reverse side.

CONTINUED ON REVERSE SIDE

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39 40 41 42

5

12 Below are some reasons that might have influenced your decision to attend this particular college. How important was each reason in your decision to come here? (Check one answer for each reason)

Very Important
Somewhat Important
Not Important

	1	2	3	
a. A teacher or friend advised me	43	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. This college has a very good academic reputation	44	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Someone who had been here before advised me to go	45	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. This college offers the courses I'm interested in	46	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. This college has low cost	47	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. A high school guidance counselor advised me	48	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. I can live at home	49	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. An employer suggested attending	50	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. A representative from this college contacted me	51	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. I can work while I go to college	52	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. It was convenient to attend	53	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l. Range of student services offered	54	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m. A number of my friends were attending	55	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
n. I received information in the mail about this college	56	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o. I read about this college in the newspaper	57	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
p. I heard about this college on the TV or radio	58	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
q. I saw a college catalog for this college	59	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
r. Other (please specify)	60	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13 Is this college your first choice? (Check one)

61 1 Yes
2 No

14 Have you earned any college credits at another college since leaving high school? (Check one)

62 1 Yes
2 No

15 Please check the appropriate box(es) for the time or times you can attend classes at this college. (Check all that apply)

63 1 Morning
64 1 Afternoon
65 1 Evening

16 Do you expect to continue every term (except summer) until you complete your goals? (Check one)

66 1 Yes
2 No

17 What is your current employment/occupation status? (Check one)

67 1 Homemaker
2 Employed half-time or less
3 Employed more than half-time
4 Not in the labor market

18 Do you have prior "work experience" in your intended major/program? (Check one)

68 1 Yes
2 No
3 Cannot answer because I do not currently have a major/program

19 Do you plan to attend college primarily full-time or part-time? (Check one)

69 1 Primarily full-time (12 hours or more each semester or quarter)
2 Primarily part-time (less than 12 hours each semester or quarter)

20 Do you have any concern about your ability to finance your education at this college? (Check one)

70 1 None (I am confident that I will have enough money)
2 Some concern (I will probably have enough money)
3 Major concern (I will probably not have enough money)

Entering Student Questionnaire

1 Name: (Please print)

Last First Middle
Initial

② Permanent Mailing Address:

City *State* *Zip code*

3 Student Identification Number

A horizontal number line with ten evenly spaced boxes. The first six boxes are labeled with the numbers 1, 2, 3, 4, 5, and 6 below them. The next three boxes are empty. The final box is labeled with the number 9 below it.

4 Sex: (Check one)

10. Female
 Male

F Race/Ethnic Identification: (Check one)

11 American Indian or Alaskan Native
 Asian or Pacific Islander
 Black
 Hispanic
 White
 Nonresident Alien

⑥ Age: (Check one)

1 Under 18
 2 18 - 20 years
 3 21 - 24 years
 12 4 25 - 34 years
 5 35 - 44 years
 6 45 - 54 years
 7 55 years and over

7 What degree are you currently seeking?
(Check one)

1 Not seeking a degree, only registered for selected courses

2 Associate Degree

3 Bachelor's Degree

13 4 Master's Degree

5 Professional degree (includes *only* dentistry, medicine, optometry, osteopathy, podiatry, veterinary medicine, law, and theology)

6 Doctor's Degree (e.g., Ph.D., Ed.D., D.B.A.)

⑧ a. Please write in your intended major/program at this school:

b. Check here if you will not have a major/program or are not sure what your major/program will be 14.1

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9 Approximately how many college credit hours have you previously completed toward the degree you are currently seeking? (Check one in each column)

a. At our school

b. At other schools

1 <input type="checkbox"/> None	1 <input type="checkbox"/> None
2 <input type="checkbox"/> 1 - 5	2 <input type="checkbox"/> 1 - 5
3 <input type="checkbox"/> 6 - 20	3 <input type="checkbox"/> 6 - 30
19 4 <input type="checkbox"/> 31 - 60	20 4 <input type="checkbox"/> 31 - 60
5 <input type="checkbox"/> 61 - 90	5 <input type="checkbox"/> 61 - 90
6 <input type="checkbox"/> 91 - 120	6 <input type="checkbox"/> 91 - 120
7 <input type="checkbox"/> 121 or more	7 <input type="checkbox"/> 121 or more

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MANAGEMENT SYSTEMS**

■ CONTINUED ON REVERSE SIDE

⑩ Below are some reasons that might have influenced your decision to attend this particular school. How important was each reason in your decision to come here? (Check one answer for each reason.)

	Very Important	Somewhat Important	Not Important
a My relatives urged me to come here	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
b My teacher advised me	21 <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c This school has a very good academic reputation	22 <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d I was offered financial assistance	23 <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e I was not accepted anywhere else	24 <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Someone who had been here before advised me to go	25 <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g This school offers the major/program I'm interested in	26 <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h This school has low tuition	27 <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i My guidance counselor advised me	28 <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j I wanted to live at home	29 <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k A friend suggested attending	30 <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l A representative from this school recruited me	31 <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	32 <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

⑪ Is this school your: (Check one)

33 ① First choice
② Second choice
③ Less than second choice

⑫ During the first year, do you plan to attend school *primarily* full-time (12 hours or more) or part-time? (Check one)

34 ① Primarily full-time
② Primarily part-time

⑬ Do you have any concern about your ability to finance your education at this school? (Check one)

35 ① None (I am confident that I will have sufficient funds)
② Some concern (I will probably have enough funds)
③ Major concern (Not sure I will have enough funds)

⑭ Check all the sources of support you plan to use to finance your first year of school.

36 ① Full or part time work while attending school
37 ① Savings
38 ① Support from parents
39 ① Employer support
40 ① Aid from spouse
41 ① Grants (Basic Opportunity Grant, Supplemental Educational Opportunity Grant, and others)
42 ① Loans
43 ① Scholarships
44 ① GI Benefits, Social Security, and other benefits

⑮ The following are statements that reflect the goals of many students who attend this school. Please check all the goals that apply to you.

45 ① a To increase my knowledge in my academic field
46 ① b. To discover my vocational interest
47 ① c To prepare for a new career
48 ① d To improve my knowledge and technical skills required in my present job
49 ① e To increase my chances for a possible raise and/or possible promotion in my present job
50 ① f To learn specific skills that will enrich my daily life
51 ① g To improve my ability to get along with people
52 ① h To become actively involved in student life and campus activities
53 ① i To increase my participation in cultural and social events
54 ① j To improve my self image
55 ① k To meet people
56 ① l To improve my leadership skills
57 ① m Other (please specify)

Former Student Questionnaire

1 Name: (please print)

Last First Middle Initial

2 Permanent Mailing Address:

Street

City State Zip code

Area Code Telephone

3 Social Security Number (Student ID):

1 2 3 4 5 6 7 8 9

4 Campus and Location:

10-11

5 Sex: (Check one)

12 1 Female
2 Male

6 Race/Ethnic Identification: (Check one)

13 1 American Indian or Alaskan Native
2 Asian or Pacific Islander
3 Black
4 Hispanic
5 White
6 Nonresident Alien

7 Age: (Check one)

14 1 Under 18
2 18-20 years
3 21-24 years
4 25-34 years
5 35-44 years
6 45-54 years
7 55 years and over

8 How long were you enrolled before you left this college? (Check one)

15 1 Less than one semester (or quarter)
2 One semester (or quarter)
3 Two semesters (or quarters)
4 Three semesters (or quarters)
5 Four or more semesters (or quarters)

9 a. Check here if you did not have a major/program at this college. 16-1

b. If you had a major/program at this college, please write it in the space below.

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17 18 19 20

9 How much help did your experiences at this college give you in reaching each of the goals listed below? (If a statement was not a goal of yours, check only the first column.)

This College Was a Great Deal of Help

This College Was Some Help

This College Was Not Much Help

This Was Not a Goal of Mine

0 1 2 3

a. To discover my vocational interest 21.

b. To prepare for a new career 22.

c. To improve my knowledge and technical skills required in my present job 23.

d. To increase my chances for a possible raise and/or possible promotion in my present job 24.

e. To complete courses necessary to transfer to a four-year college 25.

f. To learn specific skills that will enrich my daily life 26.

g. To improve my ability to get along with people 27.

h. To become actively involved in student life and campus activities 28.

i. To increase my participation in cultural and social events 29.

j. To improve my confidence in myself 30.

k. To meet people 31.

l. To improve my leadership skills 32.

m. To complete high school (GED) 33.

n. To improve my life style 34.

o. Other (please specify) 35.

11 Were you primarily a full-time or part-time student while you attended this college? (Check one)

36- 1 Primarily full-time (12 hours or more each semester or quarter)
2 Primarily part-time (less than 12 hours each semester or quarter)

12 What is your current employment/occupation status? (Check one)

37- 1 Homemaker
2 Employed half-time or less
3 Employed more than half-time
4 Not in the labor market

13 Please describe in your own words your reasons for not returning to our college this term.

14 Listed below are some academic, employment, financial, and personal reasons why a student might leave college. To what extent are these your reasons for leaving this college? (Check one answer for each reason)

Major Reason
Moderate Reason
Not a Reason

1 2 3

Academic
a. Needed a temporary break from studies 38
b. Major or courses not available at this college 39
c. Dissatisfaction with major department 40
d. Unsure about my choice of major 41
e. Course work not challenging 42
f. Low grades 43
g. Found courses too difficult 44
h. Inadequate study techniques or habits 45
i. Dissatisfied with quality of teaching 46
Employment
j. Scheduling conflict between job and studies 47
k. Accepted a job 48
l. Went into military service 49
m. Couldn't find a job while in college 50

14 continued

Major Reason
Moderate Reason
Not a Reason

1 2 3

Financial
n. Not enough money to go to college 51-
o. Applied, but could not obtain financial aid 52-
p. Financial aid was not sufficient 53-
q. Child care too costly 54-
r. This college was too expensive 55-
Personal Circumstances
s. Found study too time-consuming 56-
t. Home responsibilities were too great 57-
u. Illness, personal or family 58-
v. Personal problems 59-
w. Fulfilled my personal educational goals 60-
x. Marital situation changed my educational plans 61-
y. Moved out of the area 62-
z. Child care not available 63-

15 Looking at the above list in question 14, please select the three most important reasons why you did not return to our college this term. (List, in order of importance, the appropriate letter [a, b, c, etc.] in the boxes below)

First Second Third
64-65 66-67 68-69

16 How satisfied are you with your experiences at this college in each of the following areas? (Check one answer for each statement)

Very Satisfied
Somewhat Satisfied
Dissatisfied

1 2 3

a. My overall impression of this college 70
b. The overall quality of instruction 71
c. Availability of needed courses 72
d. Convenience of times courses were offered 73
e. The accessibility of instructors 74
f. Helpfulness of instructors in assisting me with career plans 75
g. If applicable, my overall impression of courses in my major/program 76

17 How satisfied were you with each of the college services listed below? (If you never used a particular service or the service was not available, check only the first or second column.)

Very Satisfied
Somewhat Satisfied
Dissatisfied

This Service Not Available
Never Used this Service

1 2 3 4 5

a. Admissions Office Information 10-
b. Registration 11-
c. Financial Aid Office 12-
d. Student Employment Services 13- While Attending College
e. Job Placement Office After College 14-
f. Academic Advising (faculty) 15-
g. Academic Advising (counselors) 16-
h. Guidance and Counseling Services 17-
i. Reading, Writing, Math Skills Improvement 18-
j. Testing Services 19-
k. Career Development 20-
l. Cafeteria 21-
m. Recreation and Athletic Programs 22-
n. Library 23-
o. Health Center 24-
p. Housing Facilities 25-
q. College Cultural Programs 26-
r. Minority Affairs Office 27-

18 If you left our college because of dissatisfaction with some aspect of it, please write in the space below what we could have done to encourage you to stay in college.

28-29

19 What are your current educational plans? (Check one)

1 Plan to re-enroll at this college within six months
2 Have already re-enrolled at another college
3 Plan to re-enroll at another college within six months
4 Have no plans to attend college within six months

13 How much help did your experiences at this school give you in reaching each of the goals listed below? (If a statement was not a goal of yours, check the first column and do not rate this goal)

This School Was a Great Deal of Help					
This School Was Some Help					
This School Was Not Much Help					
This Was Not a Goal of Mine					
	0	1	2	3	
a To increase my knowledge in my academic field	24	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b To discover my vocational interest	25	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c To prepare for a new career	26	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d To improve my knowledge and technical skills required in my present job	27	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e To increase my chances for a possible raise and or possible promotion in my present job	28	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f To learn specific skills that will enrich my daily life	29	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g To improve my ability to get along with people	30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h To become actively involved in student life and campus activities	31	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i To increase my participation in cultural and social events	32	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j To improve my self image	33	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k To meet people	34	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l To improve my leadership skills	35	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m Other (please specify)	36	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

14 How satisfied are you with your experience at this school in each of the following areas? (Check one answer for each statement)

Very Satisfied	1	2	3	4	
Somewhat Satisfied	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Somewhat Dissatisfied	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Very Dissatisfied	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
a Your overall impression of general education courses	37	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Your overall impression of courses in your major/program	38	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c The overall quality of instruction	39	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Availability of courses offered that were of interest to you	40	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e The accessibility of instructors	41	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Helpfulness of instructors in assisting you with career plans	42	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15 How satisfied were you with each of the college services listed below? (If you never used a particular service, check the first column and do not rate the item)

Very Satisfied	1	2	3	4	
Somewhat Satisfied	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Somewhat Dissatisfied	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Never Used This Service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
a Admissions Office Information	43	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Registration	44	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Financial Aid Office	45	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Student Employment Office	46	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Faculty Academic Advising	47	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Nonfaculty Academic Advising	48	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g Counseling Center	49	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h Reading, Writing, Math Skills Improvement	50	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i Testing Services	51	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j Career Development/Placement Office	52	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k Cafeteria	53	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l Recreation and Athletic Facilities	54	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m Library	55	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
n Health Center	56	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o Housing Facilities	57	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

16 Are you currently working at or have you secured a full-time job (35 hours or more a week) in which you plan to work once you graduate? (Check one)

1 Yes, I will continue working in the job I had before graduating
 2 Yes, I just recently obtained a new job
 3 No, but I am looking for a job
 4 No, but I intend to look for a job within the next six months
 5 No, and I do not intend to look for a job within the next six months

17 Have you applied for admission to one or more educational programs (either here or at another school) which would result in your earning another degree? (Check one)

1 Yes, I have applied
 2 No, but I intend to apply within the next six months
 3 No, and I do not intend to apply within the next six months

18 Have you been accepted for any of the programs to which you have applied? (Check one)

1 The question is not applicable because I have not applied to any schools
 2 Yes, I have been accepted
 3 No, all my applications have been rejected
 4 No, but I have not yet received a reply on all my applications

19 Regardless of whether you are going on to another educational program at this time, what is the highest degree you eventually intend to complete? (Check one)

1 Associate degree
 2 Bachelor's degree
 3 Master's degree
 4 Professional degree (include only dentistry, medicine, optometry, osteopathy, podiatry, veterinary medicine, law, and theology)
 5 Doctor's degree (e.g. Ph.D., Ed.D., D.B.A.)

13 How much help did your experiences at this college give you in reaching each of the goals listed below? (If a statement was not a goal of yours, check only the first column)

This College Was a Great Deal of Help

This College Was Some Help

This College Was Not Much Help

This Was Not a Goal of Mine

a To discover my vocational interest	24	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b To prepare for a new career	25	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c To improve my knowledge and technical skills required in my present job	26	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d To increase my chances for a possible raise and/or possible promotion in my present job	27	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e To complete courses necessary to transfer to a four year college	28	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f To learn specific skills that will enrich my daily life	29	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g To improve my ability to get along with people	30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h To become actively involved in student life and campus activities	31	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i To increase my participation in cultural and social events	32	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j To improve my confidence in myself	33	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k To meet people	34	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l To improve my leadership skills	35	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m To complete high school (GED)	36	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
n To improve my life style	37	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o Other (please specify)	38	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
—					
—					
—					

14 How satisfied are you with your experiences at this college in each of the following areas? (Check one answer for each statement)

a My overall impression of this college	39	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
—				
—				

14 continued

Very Satisfied
Somewhat Satisfied
Dissatisfied

b The overall quality of instruction	40	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Availability of needed courses	41	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Convenience of times courses were offered	42	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e The accessibility of instructors	43	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Helpfulness of instructors in assisting me with career plans	44	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g If applicable, my overall impression of courses in my major/program	45	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15 How satisfied were you with each of the college services listed below? (If you never used a particular service or the service was not available, check only the first or second column.)

Very Satisfied
Somewhat Satisfied
Dissatisfied

This Service Not Available	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Never Used this Service	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
a Admissions Office Information	46	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Registration	47	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Financial Aid Office	48	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Student Employment Services While Attending College	49	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Job Placement Office After College	50	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Academic Advising (faculty)	51	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g Academic Advising (counselors)	52	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h Guidance and Counseling Services	53	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i Reading, Writing, Math Skills Improvement	54	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j Testing Services	55	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k Career Development	56	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l Cafeteria	57	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m Recreation and Athletic Programs	58	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
n Library	59	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o Health Center	60	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
p Housing Facilities	61	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
q College Cultural Programs	62	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
r Minority Affairs Office	63	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

16 My full-time job plans once I complete my degree or certificate here are: (Check one)

1 <input type="checkbox"/> I do not intend to work at a full time job within the next six months
2 <input type="checkbox"/> I will continue working in the full-time job I had before completing my program
3 <input type="checkbox"/> I plan to work at a new full-time job I just recently obtained
4 <input type="checkbox"/> I plan to, or currently am, looking for a full-time job

17 If you have a full-time job that you plan to work in after completing your degree or certificate program here, to what extent was this job related to the major/program you were enrolled in at our college? (Check one)

1 <input type="checkbox"/> Not related
2 <input type="checkbox"/> Somewhat related
3 <input type="checkbox"/> Directly related
4 <input type="checkbox"/> Cannot answer, because I do not plan to work in a full-time job

18 Have you applied for admission to one or more educational programs at another college or university which would result in your earning another degree or certificate? (Check one)

1 <input type="checkbox"/> No, I have not applied
2 <input type="checkbox"/> Yes, I have applied and been accepted
3 <input type="checkbox"/> Yes, but I have not been accepted
4 <input type="checkbox"/> Yes, but I have not yet received a reply on all my applications

19 If you are planning to continue your education, what is your goal? (Check one)

1 <input type="checkbox"/> I do not plan to complete an additional degree or certificate
2 <input type="checkbox"/> Associate degree
3 <input type="checkbox"/> Bachelor's degree
4 <input type="checkbox"/> Master's degree
5 <input type="checkbox"/> Professional degree (includes or , dentistry, medicine, optometry, osteopathy, podiatry, veterinary medicine, law, and theology)
6 <input type="checkbox"/> Doctor's degree (e.g., Ph.D., Ed.D., D.B.A.)

Recent Alumni Questionnaire

1 Name: (please print)

Last _____, First _____, Middle Initial _____

2 Permanent Mailing Address:

City _____, State _____, Zip code _____

3 Student Identification Number:

1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---

4 If you did not graduate from our school, please check here and return the questionnaire.

5 Sex: (Check one)

10 1 Female
2 Male

6 Race/Ethnic Identification: (Check one)

11 1 American Indian or Alaskan Native
2 Asian or Pacific Islander
3 Black
4 Hispanic
5 White
6 Nonresident Alien

7 Age: (Check one)

12 1 Under 18
2 18 - 20 years
3 21 - 24 years
4 25 - 34 years
5 35 - 44 years
6 45 - 54 years
7 55 years and over

8 Which one of the following degrees did you receive when you graduated from our school?

13 1 Associate degree
2 Bachelor's degree
3 Master's degree
4 Professional degree (includes only dentistry, medicine, optometry, osteopathy, podiatry, veterinary medicine, law, and theology)
5 Doctor's degree (e.g. Ph.D., Ed.D., D.B.A.)

9 Please write in the date when you graduated from our school with the above degree.

Month _____ / Year _____
14-15 16-17

10 Please write in what your major/program was for the degree you received from our school:

FOR OFFICE USE
18 19 20 21

11 What was your grade point average when you graduated from our school? (Check one)

22 1 2.0 or less
2 2.1 to 2.5
3 2.6 to 3.0
4 3.1 to 3.5
5 3.6 to 4.0

12 Have you taken any licensing or certification examinations (for example: real estate exam, nursing exam, or bar exam) since graduating from our school? (Check one)

23 1 No, I have not taken any exams
2 Yes, I have taken an exam and passed
3 Yes, I have taken an exam but I did not pass
4 Yes, I have taken an exam, but I do not know the results yet

13 Have you enrolled in another degree program since you graduated from our school? (Check one)

24 1 Yes
2 No

If you answered YES, please complete questions 14-19 about the last college you attended since graduating from our school. If you answered NO, skip to question 20.

14 What was the name and location of the first college you attended since graduating from our school?

Name _____

City _____

State _____

CONTINUED ON REVERSE SIDE

15 Please write in your major/program while attending the above school.

FOR OFFICE USE									
COLLEGE					MAJOR				
25	26	27	28	29	30	31	32	33	34

16 Was this school your: (Check one)

35 1 First choice
2 Second choice
3 Less than second choice

17 What degree were you seeking: (Check one)

36 1 Another Bachelor's degree
2 Master's degree
3 Professional degree (includes *only* dentistry, medicine, optometry, osteopathy, podiatry, veterinary medicine, law, and theology)
4 Doctor's degree (e.g., Ph.D., Ed.D., D.B.A.)

18 How well did our school prepare you for your new degree program? (Check one)

37 1 Inadequate preparation
2 Fair preparation
3 Good preparation
4 Excellent preparation

19 What was your first term grade point average? (Check one)

38 1 2.0 or less
2 2.1 to 2.5
3 2.6 to 3.0
4 3.1 to 3.5
5 3.6 to 4.0

20 Regardless of whether you are going on to another educational program at this time, what is the *highest* degree you eventually intend to complete? (Check one)

39 1 Associate degree
2 Bachelor's degree
3 Master's degree
4 Professional degree (includes *only* dentistry, medicine, optometry, osteopathy, podiatry, veterinary medicine, law, and theology)
Doctor's degree (e.g., Ph.D., Ed.D., D.B.A.)

21 Have you held a full-time job (35 hours a week or more) since leaving our school? (Check one)

40 1 Yes
2 No

If you answered YES, please complete questions 22-30 about your first full-time job since graduating from our school. If you answered NO, you are now finished with the questionnaire.

22 How long after graduation from our school did it take you to find your first full-time job? (Check one)

41 1 I had the job before graduation
2 2 months or less
3 3 to 6 months
4 7 months to 1 year
5 Over 1 year

23 How did you learn of this job: (Check primary source)

42 1 Was already working in it while enrolled
2 College placement office
3 Professional organization or journal
4 Public or private employment agency
5 Newspaper advertisement
6 Direct application to employer
7 Faculty referral
8 Referral through friend or relative
9 Other (please specify)

24 What kind of work did this job involve? (For example, accounting, teaching, electrical engineering, welding)

25 In which of the following employment sectors was this job? (Check one)

46 1 Government
2 Education
3 Other nonprofit organizations
4 Business and service

26 To what extent was this job related to the major/program you were enrolled in at our school? (Check one)

47 1 Not related
2 Somewhat related
3 Directly related

27 If this job was NOT related to your major/program, what is the principal reason? (Check one)

48 1 Not applicable to me (My job was "somewhat" or "directly" related to my major/program)
2 I did not look for a job related to my major/program
3 I looked, but could not find a job related to my major/program

28 How well do you feel our school prepared you for this job? (Check one)

49 1 Inadequate preparation
2 Fair preparation
3 Good preparation
4 Excellent preparation

29 Which statement best describes how you regarded your first full-time job? (Check one)

50 1 Employment with *definite* career potential
2 Employment with *possible* career potential
3 Employment to earn money while I decided what kind of work I wanted
4 Temporary employment to earn money to do something else (travel, school, have free time, etc.)
5 Temporary employment until something better could be found

30 What was the starting annual salary or wage you received on your first full-time job? (Check one)

51 1 Less than \$3,000 per year (\$1.44 or less per hour)
2 \$3,000-\$5,999 per year (\$1.45-\$2.88 per hour)
3 \$6,000-\$7,499 per year (\$2.89-\$3.60 per hour)
4 \$7,500-\$9,999 per year (\$3.61-\$4.80 per hour)
5 \$10,000-\$14,999 per year (\$4.81-\$7.21 per hour)
6 \$15,000-\$24,999 per year (\$7.22-\$12.01 per hour)
7 \$25,000 and above per year (\$12.02 or more per hour)

17) How well did our college prepare you for this new college/university program? (Check one)

1 Inadequate preparation
2 Fair preparation
3 Good preparation

18) Did you have any difficulty in transferring when you enrolled for this new college/university program? (Check one)

1 No, I did not experience difficulty in transferring
2 Yes, I experienced difficulty in transferring. Please briefly indicate the nature of the difficulty.

19) What was your first term grade point average at this new college or university? (Check one)

1 Less than 2.0
2 2.0 to 2.5
3 2.6 to 3.0
4 3.1 to 3.5
5 3.6 to 4.0
6 Don't know

20) If you are planning to continue your education, what is your goal? (Check one)

1 Do not plan to complete a degree or certificate
2 Certificate
3 Diploma (other than those listed below)
4 Associate degree
5 Bachelor's degree
6 Master's degree
7 Professional degree (includes only dentistry, medicine, optometry, osteopathy, podiatry, veterinary medicine, law, and theology)
8 Doctor's degree (e.g., Ph.D., Ed.D., D.B.A.)

21) Are you interested in taking other courses at our college? You may include courses not presently offered by our college. (Check one)

1 No
2 Yes; what courses(s) _____

22) Do you currently hold a full-time job (35 hours a week or more)? (Check one)

44-
1 Yes, I have a full-time job
2 No, I don't have a full-time job and I am not looking for one
3 No, I don't have a full-time job but I am looking for one

If you answered YES, please complete the following questions about your employment since leaving our college. If you answered NO, skip to question 33.

23) Please write in the space below what your current job is: (For example: nurse, welder, secretary, insurance salesman)

45-47

24) How long after leaving our college did it take you to find your current full-time job? (Check one)

48-
1 I had the job before leaving
2 2 months or less
3 3 to 6 months
4 7 months to 1 year
5 Over 1 year

25) How did you learn of this job? (Check primary source)

49-
1 Was already working in it while enrolled
2 College placement office
3 Professional organization or journal
4 Public or private employment agency
5 Newspaper advertisement
6 Direct application to employer
7 Faculty referral
8 Referral through friend or relative
9 Other (please specify) _____

26) How well do you feel our college prepared you for your current job? (Check one)

50-
1 Inadequate preparation
2 Fair preparation
3 Good preparation

27) What is the annual salary or wage in your current full-time job? (Check one)

51-
1 Less than \$3,000 per year (\$1.44 or less per hour)
2 \$3,000-\$5,999 per year (\$1.45-\$2.88 per hour)
3 \$6,000-\$7,499 per year (\$2.89-\$3.60 per hour)
4 \$7,500-\$9,999 per year (\$3.61-\$4.80 per hour)
5 \$10,000-\$14,999 per year (\$4.81-\$7.21 per hour)
6 \$15,000-\$24,999 per year (\$7.22-\$12.01 per hour)
7 \$25,000 and above per year (\$12.02 or more per hour)

28) Which statement best describes how you regard your current full-time job? (Check one)

52-
1 Employment with definite career potential
2 Employment with possible career potential
3 Employment to earn money while I decide what kind of work I want
4 Temporary employment to earn money to do something else (travel, school, have free time, etc.)
5 Temporary employment until I can find a job in my field
6 Temporary employment until I can find something better

29) To what extent is your current job related to the major/program you were enrolled in at our college? (Check one)

53-
1 Current job is not related to my major/program
2 Current job is somewhat related to my major/program
3 Current job is specifically what I was trained for in my major/program

If your current job is somewhat related or the same as your major/program at our college, skip to question 33. If your current job is NOT related to your major/program, please answer questions 30-32 to help us better understand why not.

30) Did you ever look for a job related to your major/program? (Check one)

54-
1 Yes
2 No

31) Are you willing to move to another community to get a job in the field for which you were trained? (Check one)

55-
1 Yes
2 No

32) Please check from the list below the principal reason why your current job is not in your major/program.

56-
1 I never looked for a job related to my major/program
2 I looked, but could not find a job related to my major/program without moving out of the geographic area.
3 I looked, but could not find a job related to my major/program even in other geographic areas.
4 I have held a job related to my major/program, but decided to get into a new employment field.

33) In the space below, please write any comments you have on your experiences at our college, comments about this questionnaire, or comments on any other related topics.